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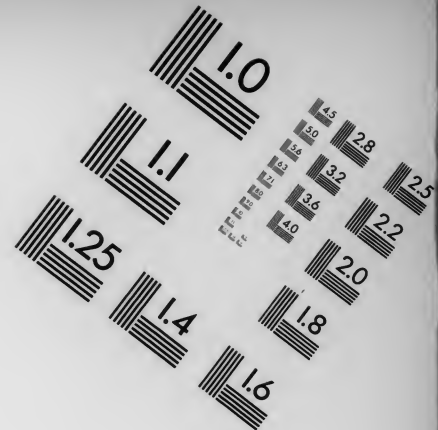
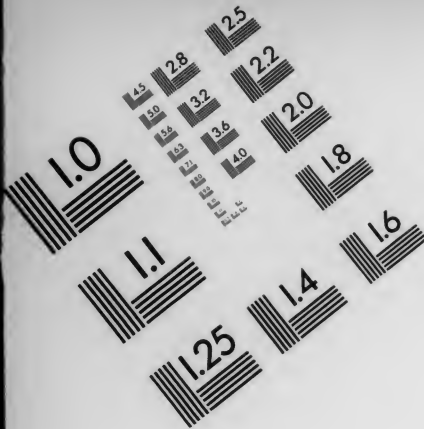


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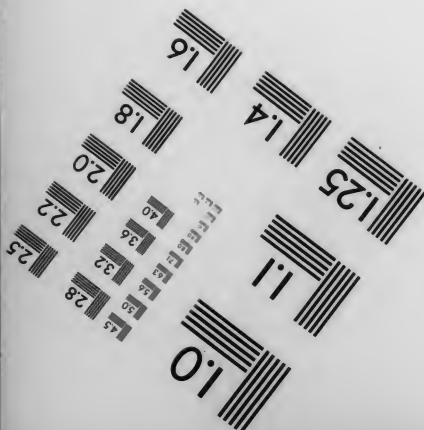
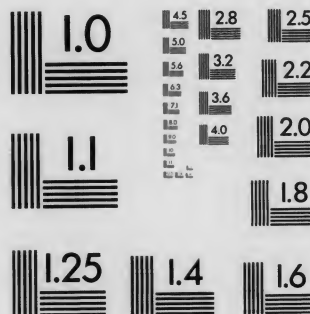
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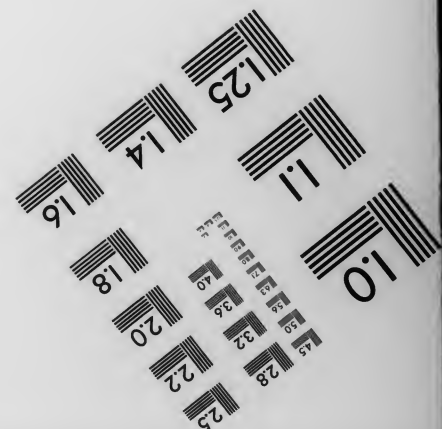
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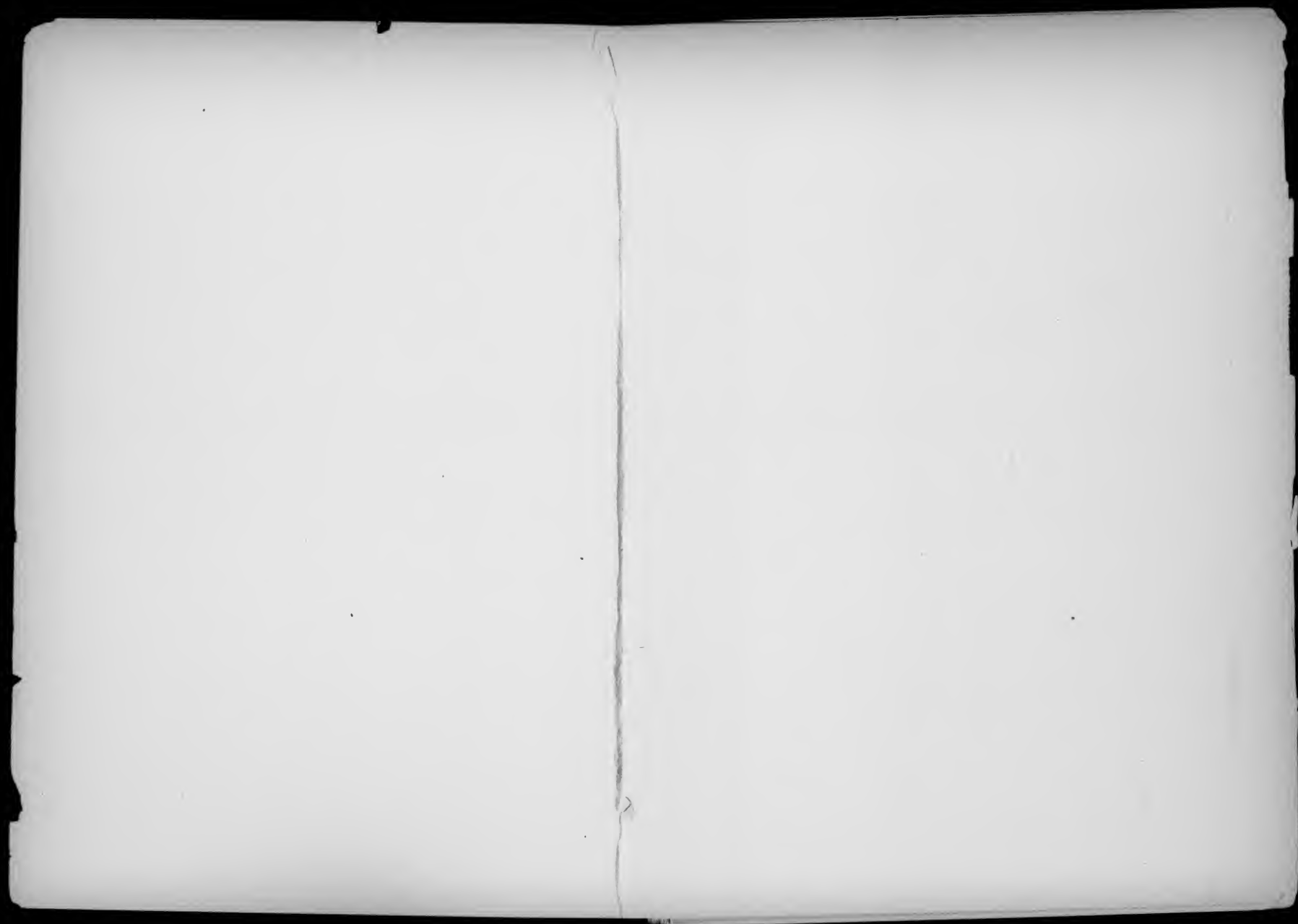
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# PARADOXES

FROM THE GERMAN

OF

MAX NORDAU

Author of "THE CONVENTIONAL LIES OF OUR CIVILIZATION,"  
"PARIS SKETCHES," ETC.

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(AUTHORIZED ENGLISH EDITION.)



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## PREFACE.

Wherefore "Paradoxes"? Because this book enters upon the discussion of the problems of which it treats in all candor, unbiased by the intimidating decrees of schools and indifferent to customary views and opinions. Statements hitherto considered unimpeachable, because no one has ever questioned their validity, must submit to the demand for their proofs, and then it frequently appears that they have none. Commonplaces are compelled to vindicate their veracity, and if they cannot do this, neither rank nor standing will save them from condemnation. The chief aim of this book is to demonstrate that even what is most self-evident is still open to many doubts and may lead to much perplexity, as it frequently happens that the same fact may be supported by the most opposite theories and explanations, which all seem equally plausible and probably are all equally erroneous. The author will have accomplished his purpose if he succeeds in inducing the reader to distrust all ready-made formulas, and yet give due consideration to every utterance of honest opinion, to admit that the most convincing demonstration still leaves room for doubt, but also to patiently sift the most unacceptable argument, and, more than all, never to renounce the right of individual conclusions, even in favor of the highest authorities.

The author is willing to allow these principles to be applied to himself first of all. He does not ask any one to share his views; all he asks is a hearing. He does not flatter himself that he has discovered solutions, all he desires is to induce the reader to search for them. In striving for truth the main thing is not the finding but the seeking. He who has honestly sought has done enough.

THE AUTHOR.

Paris, May, 1885.

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## OPTIMISM AND PESSIMISM.

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The pyramids, are they considered one of the wonders of the world? The hanging gardens of Babylon? The Colossus of Rhodes? I know of a greater—the most artistic and the most astounding perhaps, ever conceived by the mind of man. This is pessimism. By this I mean that genuine, fundamental pessimism which has become the universally accepted point of view, from which nature, humanity and life itself, seem forever the same as in the dismal reaction and fit of the blues which follow a prolonged drinking bout.

We must discriminate between two kinds of honest pessimism—the scientific and the practical. Scientific pessimism is constantly criticising in the most annihilating manner all the phenomena of the universe, singly and collectively. The universe, it teaches with profound conviction, is a wretched piece of workmanship, no better than the abortive first attempts of some prentice hand. Has its existence any purpose, any way? We stand and shake our heads in front of the ponderous and intricate machine, seeking in vain to discover a mind and reason in the furious whirl. And if we accept that the universe is an irrational, purposeless chaos, is there any law or logic in its separate parts, at least? No. It is crude chance alone that rules nature, and that in nature which most interests us—humanity. No sense of morality governs the course of events, either great or small. Evil triumphs oftener

than good. Ah! man throws Ormuzd down stairs and insolently chuckles if the latter breaks his leg on the way. Why does such a world exist? why does such a world continue to exist? And would it not be far better and more in accordance with the laws of morality, if it were to be hurled back into primeval chaos from which it is supposed to have emerged—which latter point, however, is still to be proved.

What a foundation of naive vanity and self-glorification there is to this way of thinking! It proceeds upon the assumption that the human intellect is the highest production of nature; that it can grasp and comprehend everything that exists; that without it, nothing can exist; and that its laws must be those of the universe also. From this point of view alone is this criticism of the phenomena of the universe comprehensible.

If nature is governed by an intellect constituted similar to that of man, it is certainly foolish and open to criticism; for it does not allow us to understand its intentions; it plays silly tricks; it is first extravagant and then stingy, and it manages with such a disregard for the future and so recklessly, that it ought to be placed under the guardianship of some professor of philosophy, and the sooner the better.

The case is similar in regard to the aggravating lack of morality in the way the world is managed. If some highly-cultured, noble-minded gentleman of this Nineteenth Century, with the highest references from his local authorities, had charge of the ordering of the world, things would certainly be very different. Then we would not be distressed by the spectacle of virtue pursued by misfortune, and vice would not arouse our indignation with its insolent triumphs. As often then as such a gentleman feels impelled to construct a world after his own heart, that is, to

compose a romance or a play, he has the most delightful morality prevail and the dear public applauds till its hands are weary, if on the last page or in the fifth act, virtue receives a reward of merit and vice five years in the penitentiary; and it soliloquizes: "That's the way it ought to be! Only life is not so successful in its attempts as our noble poet." It is true that even among authors there are some odd fellows who seem to take it upon themselves to portray the reality without discrimination or improvement; and in the works of these unimaginative individuals matters go just as dubiously as in real life itself: Hans does not win his Gretchen notwithstanding the fact that he loves her sincerely and loyally; she prefers some scoundrel who makes her miserable; talents go to waste because they can not find any circumstances favorable to their development; and his Honor, the Mayor, is still mayor, though the whole city knows the story of how he obtained his position. Morality does such a poor business here that she finally goes into bankruptcy, and the public turns angrily away from such discouragingly immoral productions.

It is then to be taken for granted that nature is neither logical nor moral, and that it ought either to improve or disappear entirely.

But, you poor wretch, criticising thus, how do you know that your logic is anything more than the law which regulates the coexistence and course of organic events in your own mind alone? Whence have you the right to apply it to the course of events in the universe? Is it not possible, and even extremely probable, that our human logic governs the cosmic phenomena to the same slight degree as the tiny key to your watch will open the complicated lock of a fire-proof safe? The forces that govern our organism and the universe may still be identical, just as the

mechanical principles upon which the intricate lock and the watch are constructed are the same. It is then only a question of the difference between something small and something infinitely great, between something comparatively simple and something in the highest degree complicated. Nothing proves to us that there is not in nature some vast mind or consciousness, whose extent our circumscribed consciousness is unable to grasp. We may have Spinoza's pantheism or Schopenhauer's will in our minds—the name is immaterial. One thing is certain: we see that matter, when consolidated in the form of a human brain, and force, when acting as nerve-power, produce a consciousness. The same elements that form the body and brain of a human being, among which, next to oxygen, hydrogen, nitrogen and carbon, iron, phosphorus, sulphur, calcium, sodium, potassium and chlorine are the most important, are also found in enormous quantities outside of the human organism; the forces that produce the vital processes, that is, the chemical and mechanical influences, electricity, and other forms of power that are still unknown to us, are also seen to be in operation outside of the human organism. Who, then, is so bold as to assert that these elements and these forces are unable to produce a consciousness except in the form of a nervous system, except in the form of a human brain? Is it not conceivable and even probable, that the form of the nervous system is something accidental, and that the elements composing it, the forces operating in it, are all that is really essential? and that they can also serve as a foundation for a consciousness when they operate upon each other in some manner entirely different from that which prevails in the organisms accessible to our observation?

But I go still farther and say: We do not even need the assumption of a primal mind or consciousness to be

aware of the fact that we have no right to measure the affairs of the universe with the petty yard-stick of human logic. Before we declare the way in which the world is managed to be contrary to reason, we must first assume that it has some purpose, that it is working toward some special aim or other; as in the case of a passer-by of whom we know nothing, not even whether he wants to reach any special place nor whether he is not merely walking to keep himself in motion, we surely have no right to assert that he is selecting the wrong road, and going out of his way, and that he does not progress rapidly enough. This presumption of an aim, however, is entirely arbitrary. It is certainly conceivable, that finality, as well as causation, may be a phenomenon associated exclusively with organic processes, and outside of the organism simply have no existence. Experience has taught us that no act of the reason or will is produced in our brain without having its origin in some preceding change in the nervous system, or in some impression on the senses. We have for this reason grown accustomed to presuppose a cause for each one of our actions, for each of the processes occurring in our organism, even when we are not specially cognizant of it; and we generalize this custom and carry it into our judgment of the phenomena which occur outside of ourselves. Yet because our organs require an external impulse before they can be set in motion, because they do not work without some stimulus, because each change in them must necessarily have some cause, because they are therefore really subject to the law of causation, it does not follow at all that this law governs matter under conditions which are entirely different in every respect from those in our organism. Let us suppose a coffee-mill to be a reasoning being; would it not be obliged to believe that a woman's hand was the indispensable prerequisite to all,

motion, and that no motion would be conceivable unless it were caused by a woman's hand turning a crank? If this poor coffee-mill were now to see an electro-dynamic machine which is set in motion without any human hand coming near it, this phenomenon would of course seem incredible and inconceivable to it, and it would seek in vain for the causation which in its mind had assumed the exclusive form of a woman's hand. From its point of view, the coffee-mill certainly can not help supposing that motion is impossible without the intervention of a woman's hand; its experience must lead it inevitably to this conclusion, and as regards all coffee-mills in general, it is entirely correct. Yet we know, nevertheless, that it is erroneous, and that its law admits of no generalization—that there can be motion without its being produced by a woman's hand, even if, as far as this goes, some gallant simpletons almost share the coffee-mill's ideas. I do not overlook the fact that the movement of the electro-dynamic machine is due to a cause as well as that of the coffee-mill; but my illustration is only to prove that the inferences drawn from a particular sequence of facts are not at all capable of being generalized into laws which would be applicable to different kinds of facts. The same thing would occur to a locomotive endowed with reason, in regard to finality, as to my coffee-mill in regard to causation. It would know that its steam had for its object the turning of wheels by means of the piston. If it should happen to be of an epigrammatic turn of mind or fond of laconic expressions, it might exclaim with some little self-satisfaction perhaps: "No steam without revolving wheels." How intensely astonished, then, this locomotive would be, if it should happen to stand before the Great Geyser and observe the enormous production of steam which yet did not turn even the smallest kind of a wheel! This would seem absurd to it; all its preconceptions of the pur-

pose and operation of steam would be upset, and it would not surprise me at all if the locomotive were to lose its reason over this weird phenomenon, not to be explained by any law known to it. It might even be possible that the changes of matter which occur outside of our organism, might have their cause in matter itself, and be their own cause and aim; that we would therefore seek in vain for an external cause for them and an external aim, which presupposes a relation to some other combination of matter. In this case we could no longer call nature contrary to reason; our criticism of its aims or lack of aims would have no possible foundation; and to be able to understand and judge it, to comprehend a cause and purpose in its phenomena, we would have to stand at the central point from whence these phenomena are evolved.

The complaints in regard to the immoral way in which the world is managed are even more *a la* coffee-mill than those in regard to its lack of purpose. From the standpoint of our conceptions of morality they are certainly well founded; but who, pray, gives us the right to place ourselves at this standpoint when we wish to contemplate nature and life? Our conception of morality is something restricted to the age and the place; it is something of historical growth; it changes its pattern like clothes and the shapes of hats. It is the morality of white and Christian mankind in this Nineteenth Century, and of no one else. Even in the narrow limits within which it has at least theoretical sway, it has to make many concessions and yield to many contradictions. It brands homicide as a crime when it is committed by a single individual, and glorifies it as something noble and laudable when an entire nation in arms perpetrates it upon some other nation. It pronounces deception and falsehood a vice, yet it allows them in diplomacy. A great and cul-



tured nation, the United States of America, which punishes with great severity robbery and theft committed by individuals, regards these crimes as of no consequence when communities, cities or states become guilty of them by deceitfully proclaiming themselves insolvent and defrauding their creditors. Our conception of morality is something different today from what it was in the known past, and it is not unreasonable to suppose that it will be something still different again in the future. It is in short nothing but a definition of the conditions recognized for the time being as useful to the maintenance of our race, cast in the form of laws and rules. With the development of the human race some of the conditions to its prosperity change, and with them also the ideas as to what is moral and what immoral. And this variable standard—our conception of morality—is it to be applied to the affairs of the universe? Something which even our great-grand-fathers did not accept, and which perhaps our grandchildren will no longer recognize as the truth, is this to be the immutable law of eternal nature! If some silly girl were to complain of the uniform blue tint of the sky and insist upon its color changing every day with that of her costume, so as to be in exact harmony with it, she would be quite as wise and quite as modest as the critic of the universe who is distressed at the lack of morality and the arbitrary tyranny in the way the world is managed.

Aristotle's geocentric theory has been abandoned in cosmology ever since the time of Copernicus. It is no longer believed and taught that our earth is the centre of the whole system of the universe and man the final aim of nature; that the moon was created for the sole purpose of illuminating our nights, and the starry host to serve as similes for our lyric poets. In philosophy, however, we still adhere to this puerile conception and abuse the whole sys-

tem of the universe as idiotic because the supply of coal will probably be exhausted in time, and because Cracatoa was destroyed with some thousands of people as fond of life as we are; and we consider it immoral because Joan of Arc was burnt at the stake, because Gustavus Adolphus fell at Luetzen, and because so many loving mothers die at child-birth.

If the bacteria of decomposition are capable of philosophical reasoning, how dismal their prospects must seem to them! All the world's inventions, regarded from their point of view are horrible and hideously immoral and are daily becoming more so. The broom and the scrubbing-brush, the fatal acid and the dreadful hot water have conspired together against their existence; that which might serve as nourishment for them, is removed, destroyed, made inaccessible to them by invisible powers. That destroying agent, carbolic acid, often 'breaks into their life just when they are most comfortably situated, and changes their merry revelry into a dance of death, in which the virtuous bacterium must join as well as the vicious one. But the very things that must be to them the cause for a really justifiable pessimism are described by us in ponderous volumes as the progress of sanitation, and eulogized as a subject for congratulation.

I can imagine an insect endowed with a taste for art—a fly for instance, which might consider the little bee, the mint-mark on French twenty-franc pieces of a certain date, especially beautiful—and there is nothing absurd in this illustration, for the preference of this insect for paintings and statues is known only too well and disagreeably to all neat housekeepers. But suppose it happens to fly past the colossal statue of Bavaria at Munich—how devoid of sense, how illogical, how unshapely this mass of metal must seem to the tiny insect—without beginning or end; first

incomprehensibly smooth, then strangely rough; here some strange, aimless elevation, there some irregular depression; and if the aesthetic fly were obliged to pass its life in the interior of the great statue, it could write a book full of bitter epigrams upon its conception of the universe; and dilate most eloquently upon the lack of purpose and sense in its world, in a way sure to convince all its companion insects in the interior of the colossal Bavaria. And yet it would not have come anywhere near the truth, as any ordinarily intelligent courier or guide in Munich could prove to it without the least difficulty.

No, no; the philosophy of pessimism can not bear serious investigation. As far as it is honest it seems to be only one form of profound dissatisfaction with the limitations of our understanding. We would like to comprehend the mechanism of the world, but we cannot; this provokes us, and we consequently abuse it; just as an unsophisticated savage would throw down a music box in a rage, after he had tried in vain to comprehend its construction. We glorify ourselves as the lords of creation and yet we are obliged to admit, little by little, that our lordship has after all not so very much to rest upon. We lose our temper at this; we reduce our bad humor to a science—and call it pessimism. The child that stretches out its hand for the moon and begins to cry because it cannot reach it, is a pessimist also in its way without knowing it. Only its pessimism can be easily cured with a little candy.

It is, however, gratifying to learn that as a rule, the systematic advocates of pessimism can enjoy good food and good drink, that after a sentimental courtship conducted according to the most approved methods, they get married with all due ceremony, and have a highly developed appreciation of everything agreeable in life. Their philosophy is an official robe for great occasions, and as such imposing

enough for the admiring crowd of spectators; but we know that under the sacred robe with the skull and cross-bones, they wear the usual every-day underclothing, the invisible but comfortable flannel vest such as Tom, Dick, and Harry are wearing too.

Besides this genuine scientific pessimism, which does not preclude the greatest enjoyment of real life, there is also a practical pessimism, known familiarly as crankiness. This kind of pessimism neither reasons nor argues. It has no systems, no classifications. It does not make the slightest attempt to explain why the world and life are not satisfactory to it; it merely feels instinctively and in all sincerity that everything that exists is unendurable and tends to produce destructive thoughts. Such a pessimism can not be refuted; it can only be analyzed. It is always the attendant phenomenon of some disease of the brain, either already fully developed or as yet only in its incipient stages. Years before one of these unfortunate candidates for the lunatic asylum is pronounced insane, he suffers from melancholia, shuns society and becomes misanthropical. An imperfectly developed organ of thought or one subject to inherent destructive tendencies, has the dismal gift of perceiving its own approaching collapse, of observing its progress, and of realizing the fact that it has begun to decay. In such cases the mind has its own dissolution perpetually before its eyes, and this horrible spectacle fascinates it to such an extent that it retains only a weak and distracted power of perception for other phenomena. Such a brain must necessarily reflect the world like an eye overgrown with a cataract,—as the tragic darkness of chaos. All the great poets of the "world-is-out-of-joint" style have been deranged organisms. Lenau died a lunatic; Leopardi was a sufferer from certain generic affections well known to physicians conversant



with mental disease; Heine was never gloomy nor melancholy until his spinal disease had extended its constantly increasing depredations to his brain; and Lord Byron's eccentricity of character is called genius by the unprofessional, while the psychologist's technical term for it is psychosis. This pessimism which wrings its hands at the sight of a pair of lovers, and bursts into sobs on a bright May morning, without cause, without consolation and without any respite, is a disease; and no healthy person will ever think of such a thing as adopting it.

These are the two kinds of honest pessimism which alone have any claim to criticism. In addition to these, there is, it is true, a hypocritical gloomy disposition much affected by certain fools who imagine it is becoming to them. It is a dainty dilettanteism, an intellectual token of superiority which distinguishes them from the common herd. A certain pallor of thought is considered interesting by persons of perverted tastes, like pale cheeks. They are blasé and bitter in order to create the impression that they have had many and remarkable experiences, that they have been the heroes of numbers of strange adventures. They sigh and groan to make others believe that they are members of the small and extremely aristocratic company which has been initiated into the Eleusinian mysteries of suffering. It is not worth while wasting our time analyzing pessimists of this class. We poke them in the ribs in the French fashion, and say: "Ah, you rogue!"

I have called the pessimism of the day the most astonishing marvel the world has yet produced, meaning by this that it was a triumph of the imagination over reality and a proof of the ability of man to force nature in spite of her most vigorous resistance into a dress designed for her by his caprice. Just as he causes the spreading crown of branches of noble trees to grow in the senseless

shape of animals and architectural designs, and as he compels water in spite of its most emphatically expressed disinclination, to flow up hill by means of pumping machinery, so he constructs out of facts which offer him the liveliest and brightest ideas, a most dismal point of view for the universe, and carries his pessimism into nature which sings and proclaims optimism from all the bells of her flowers and throats of her birds.

For this is exactly what nature is doing, and it is not even necessary to listen with especial attention to hear it, for the sound will penetrate, even if we stuff our ears full of scholastic and pedantic cotton. The primal instinct of man from which all his ideas and actions proceed, is optimism. Every attempt to uproot it is futile; for it is the essential foundation of our being and can only be destroyed with it.

If we inspect closer the principal subjects for the complaints of pessimism, we find that they proceed from a superfluity of rank self-conceit, and that they might be compared to the cares that his wealth entails upon the millionaire. We are discontented with the lack of purpose in the universe as a whole, or rather with man's incapacity to discover its purpose. But is not this discontent in itself alone an indication of the high development to which the human mind has attained? and have we not cause to rejoice at what has been already achieved? The mere inquiry as to the final aim of nature requires a certain vigor and power of thought. What a broad mental horizon is necessary before even problems such as these can be recognized! And to what beautiful prospects man must have climbed, how many intellectual enjoyments and delights he must have experienced on the way, before he attained to the lofty position where he believes himself really justified in and capable of summoning the universe to his feet and

saying to it with the authority of a chief inspector: "You must have been designed in accordance with some plan; I wish to examine this plan so as to pass judgment upon it!" No animal ever feels the pessimism of self-insufficiency (the *Weltschmerz*), and our progenitor, the contemporary of the cave-bears, was certainly free from all anxiety as to the final destiny of mankind; when this primeval realist had eaten all he wanted, he unquestionably thought that his life had sufficient occupation; and if he happened to have any other desire left, we may safely assume that it was to go to sleep undisturbed. But we have become more cultured with the increasing facial angle, and we have ideals far above and beyond a fat buffalo steak; and while, as is only natural, our zeal for intellectual acquirements becomes more and more eager the larger the amount of intellectual capital we have accumulated, and as we have already come such a wonderful distance, we can no longer endure to have any limit set to our further advance and progress.

The case is similar in regard to one of the other complaints of pessimism: that concerning the presence of pain in the world. What short-sightedness; I am almost disposed to say, what ingratitude! But, noble pessimists, if pain did not exist, it would have to be invented! It is one of the most benevolent and most useful of nature's provisions. In the first place, pain presupposes a sound and highly developed nervous system; and this is also the preliminary condition to all the agreeable sensations, whose presence in life we certainly cannot deny. The lower forms of life are incapable of acute sensations of pain; but we may assume that in the same way their agreeable sensations are incomparably duller and feebler than our own. It would be altogether too extraordinary if our senses were sufficiently acute to delight in the perfume of a rose, or

one of Beethoven's symphonies, or Titian's paintings, and yet were insensible to the odor of decomposition, the grating of a file against the teeth of a saw, and the spectacle of a cancer. Ask a hysterical invalid afflicted with paralysis in one or both sides of her body, whether she is pleased with her utterly painless condition! The external world can not inflict pain upon her; but neither can it yield her any agreeable sensations, and after a brief experience she will beg and pray to be made able to feel pain again. Scores of times I have been a witness when an invalid like this would scream with delight when first the prick of a needle hurt her once more. Pain has the rôle ascribed to the guardian angel by superstitious miners; it is our monitor which shows us danger and warns us to struggle against it or flee from it. It is therefore our best friend, the preserver of our life and the source of our intensest enjoyments. For pain incites us to effort to counteract its causes, and this effort is associated with the highest display of our capabilities, and affords us that incomparable delight which always attends the active expression of our individuality. Without pain our life would last but a moment, for we would not know how to recognize injurious objects and hence could not protect ourselves against them. One of these improvers of the world might perhaps urge in objection that it is possible to conceive of such a thing as intuition taking the place of the sensation of pain. It would not be necessary then for us to be warned by suffering to put ourselves in a position of defense against threatening influences—a painless intuitive perception of what is injurious might render us the same service. It may be observed in reply to this that either the intuition would not be powerful enough to spur and arouse us to action, and in that case we might not respond always or in a sufficient measure to its admonitions, and thus we would be easily vanquished by

the enemies to our existence—or its warning would be so forcible and urgent that we should be obliged to respond with an excessive exertion of all our powers, and in that case we should experience it as pain just as in the warnings now given us by our sensory nerves.

What pain is to the physical organism, discontent is to the mental and moral. If it appears with sufficient violence to be recognized as suffering, it becomes an incentive to alter and improve the circumstances which cause it, by the exertion of all our faculties. The idea of regarding his surroundings with glances eager for destruction, will never occur to a happy man. Even Hercules would not have performed his twelve labors without compulsion, though they did not cost him much of anything, and before we feel like making our beds over again, we must first lie uncomfortably. Discontent is therefore the cause of all progress, and those who lament its presence in our mental and moral life as a calamity, ought to have the courage to acknowledge in the first place that the condemnation of mankind to an unchanging, life-long, Chinese sort of existence is their highest ideal.

However, discontent with the existing circumstances in which an individual or an entire people is obliged to live can not be applied as an argument in favor of pessimism. It is, on the contrary, still another proof of the fact that an indestructible optimism is the foundation of all our thought. For every criticism is the result of a comparison instituted in the mind between the actual and the ideal conditions, which latter we have constructed in the world of our imagination, and which we regard as perfect. But the fact that we can formulate such a criticism with more or less distinctness, is based upon the idea that the circumstances which we consider wrong or unendurable are capable of a change for the better; and this idea

must certainly be called an optimistic one. And not only this: while we are thus grumbling at something which already exists, while we are clearly thinking or indistinctly feeling that it might be better or how it might be made better, we have already carried out the improvement potentially. In the imagination of the discontented individual the transformation is already an accomplished fact, and has for him, at least, that degree of reality which all things possess in our consciousness—a reality which is the same in the perception of the external world by means of the sensory nerves, as it is in the creations of our imagination, that is, an improved ideal world, formed by some combined action of the brain cells. Thus every discontented person is in his own mind, a reformer, a creator of a new world, which exists in his imagination, and which includes all the conditions necessary to human happiness; and if he is skilled in analyzing his own sensations, he will soon discover that his discontent with existent objects leads to his being highly satisfied with himself, and that the pleasure afforded him by this ideal world of his own creation at least balances the displeasure occasioned by the world of reality. And here I do not hesitate to give my argument a personal turn and ask the honest philosopher of pessimism whether he is not exceedingly pleased with himself when he has succeeded in setting forth in a convincing style the general depravity and lack of reason in the world and in life? He may perhaps jump up from his writing table and run to embrace his wife in his delight, if some page of his dissertation has turned out an especially deep black; and when his book is finished he reads some chapter in it aloud to his friends in the club room, and experiences as he does so an internal satisfaction which alone would make life for him well worth living.

To sum it all up: our bitterness at our failure to un-

derstand the mechanism and purpose of the universe is a proof of the high development of our powers of thought, which yield us continual gratification and delight; physical pain is an indication of the health and capabilities of our nervous system, to which we owe all the agreeable sensations of our existence, and discontent is the cause of a creative activity in our imagination which is to us the source of great private satisfaction. Where pessimism comes in here, I am at a loss to determine.

I hope no one will so far misunderstand my arguments as to consider me a disciple of the sage Pangloss. I am by no means a believer in the doctrine taught by this philosopher of content, and am far from maintaining that this is the best of all possible worlds. What I assert is something very different to this. I say that this world may be the best or the worst of all possible worlds, or anywhere between these extremes; yet mankind will always and forever consider it desirable. Man has the wonderful faculty of accepting with a certain grim toleration the natural conditions which are absolutely beyond his power to alter, and more than this, of becoming accustomed to them, and learning to regard them as pleasant and matters of course, and finally of becoming so attached to them that he has no desire to exchange them for others, even if he can imagine far better ones. This, certainly, is only possible because the web of his being, upon which experience embroiders all sorts of melancholy figures, consists of optimism, pure and simple.

Can there possibly be any necessity for examples to illustrate these assertions? They are close at hand. Even the professional pessimist concedes the beauty of nature and rejoices in a fair summer day, when the sun shines forth from the cloudless blue of the heavens, and in a balmy night in June, with the full moon in the midst of

ten thousand twinkling stars. On the other hand, an inhabitant of Venus, transplanted suddenly to our earth, would probably find it a dreary wilderness of cold and darkness. Accustomed to the dazzling light and furnace heat of his native planet, he would probably shiver with cold in our tropical noon, and consider our most gorgeous colors faded and ashen, our most brilliant lights pale and dim. And how dull, how dead our sky with its solitary moon, would seem to an inhabitant of Saturn, accustomed to the inconceivably brilliant shifting panorama of eight moons, and two rings, and possibly even more than two, which with their rising and setting, their constantly changing relative positions, and their complicated motion present to his view a wealth of variety of which we are unable to form even an approximate conception. And yet we have no longing whatever for the magnificent sunshine of Venus and the bewildering quadrille of Saturn's moons, but are as gratefully content with our paltry astronomical surroundings as if we had really been sitting at the feet of Pangloss. And why need we introduce the inhabitants of our sister planets? There is no necessity for any flight into space to demonstrate the optimism of mankind. We need only glance at the polar regions. Human beings are living there whose cheerfulness has been remarked by all explorers. They can conceive of nothing more superb than their icy habitations and their eternal night; and if there were poets among them, they would sing of the fearful snowy wastes of Greenland without doubt, as our bards declaim of some landscape on the Rhine, with vine-clad hills, fields of waving grain, and dusky forests in the background. This idea, by the way, gives us a more cheerful prospect for the future ice-period, which the earth is approaching as it grows older, if the cooling hypothesis be correct. When we picture this future in our imagination, we usually think

of the last human beings as enveloped in sealskins, crouching over a miserable fire made of the last remaining coals, holding their lean hands over the scanty blaze, and forlorn, forlorn as a consumptive orang-outang in the Berlin zoölogical garden. This picture is certainly erroneous. Judging of our descendants of the glacial era by the Esquimaux of the present day, I am convinced that the former will be the jolliest fellows imaginable. They will form carnival societies, hold daily festivals upon the ice, keep the cold out of their limbs by unwearied dancing, enjoy their melted blubber accompanied by gay and noisy drinking songs, and consider their lot a most happy one. When finally the very last human being freezes to death, he will probably die with a broad smile on his lips and the latest number of *Punch* or the *Kladderadatsch* of the day in his rigid hands.

The poet tells us, it is true, that life is not the highest good; we think and feel, however, as if it were. The thought of the cessation of our consciousness, the annihilation of our personality,—death, even if not our own, but that of our parents, children, or any one we love, causes us the bitterest pangs that we are capable of experiencing, and we are unable to wish for ourselves and our friends any more precious boon than a long life. But what is a long life? A hundred, a hundred and twenty years; these are the highest figures; nobody would ask for more than this. A centenarian feels that he is to be envied; and on the other hand, we lament the fate of the young man obliged to die in his twentieth or twenty-fifth year. These ideas, accepted so universally, which we neither oppose nor criticise, are the logical result of our perennial optimism. We are satisfied with a hundred years, or less, because we scarcely ever see an instance in which this limit is passed. If two or three hundred years were the average

length of the life of man, as is said to be the case with the raven, the carp and the elephant, we would want to live two or three hundred years, and mourn if we were told that we must die at one hundred and fifty, although at present we do not even want more than a hundred. On the contrary, if man's organism were adapted for a life of thirty or thirty-five years at most, like that of the horse, for example, no one would wish to grow any older than thirty or thirty-five, and we would consider an individual dying at this age as fortunate as we now consider him an object of pity. And more than this: if we knew of an instance—even one single instance—of a person's having escaped the inexorable law of death, nobody would ever want to die. Each individual would hope, wish and dream that this phenomenon, observed but once, would be repeated in his own case. The great majority of mankind would then look upon death in about the same way as they now regard a Chinese execution, where the victim is sawed in two between a couple of boards—as a terrible and exceptional fate which sometimes befalls individuals, but which all strive to avoid by every means in their power. As we have never heard, however, of any one's having escaped death, we all become reconciled to the idea of shuffling off this mortal coil without any special difficulty, and even without any special grief, and we only hope that it will occur at an advanced age. Might it not be possible for man to live several hundred, several thousand years? We see no reasonable objection why this might not be. But we do not wish for it, simply because we know it can not be. Is it absolutely necessary, after all, that death should put an end to our individual existence? We are unable to perceive any real necessity for it, although in the last three years, Weismann and Götze have attempted to prove that it is a decree designed in the interest of



the race. And yet we accept the fearful fact of death, simply because we know it to be inevitable. We are, in short, so happily organized that we accept what is actual, what is absolutely unavoidable, with unconcern, and do not distress ourselves further with dismal thoughts. This explains among other things the possibility of that disposition to gayety of humor proverbial among criminals on their way to the gallows. Its occurrence cannot be doubted, for it has been observed by many reliable witnesses. The condemned criminal becomes reconciled even to the rope, when he is at last convinced that it is inevitable.

If, on the other hand, the faintest, the remotest possibility remains that a condition can be changed, an evil avoided, or some event happen in his favor, how triumphantly, how irrepressibly does the innate optimism of man burst forth again! A chance so infinitesimal that no man in his senses would stake his money on it, perhaps even so minute that it is beyond the range of probability, serves him for the foundation to the most elaborate castles in the air, and works him up to a state of expectancy which almost approaches bliss. Here is an extreme example of the tendency of mankind to optimism. A lottery was instituted in France in which the great prize was 500,000 francs. Fourteen million tickets were issued, of which one only could be the successful one. Each purchaser of a ticket thus acquired one fourteen-millionth of a chance that the great prize would fall to him. To exhibit the value of this fraction I will introduce an analogy. There are in Europe about 100,000 millionaires, and probably over 500,000 persons who possess half a million. We will omit the half million and take only the one hundred thousand named as a basis for our calculation. Now let us assume that out of ten millionaires one is childless,

without near relatives, or at enmity with his family and in the mood to leave his entire property to some person whose acquaintance he has happened to make, and to whom he has become attached. Europe contains at present about 320 millions of inhabitants. There is therefore for every 32,000 Europeans one millionaire who is only waiting for an opportunity to bequeath his million or millions to one of these 32,000 people. The proportion is even more favorable for a German or an Englishman in reality, as millionaires are more numerous in Germany or England, than they are in Russia or Italy, for instance. The probability that any one of us, without buying any ticket, will inherit the wealth of some millionaire, is therefore at least one thirty-two thousandth, and is, accordingly, four hundred and thirty-seven times as great as the probability that the holder of a ticket in the "*Loterie des Arts*" will win the prize of 500,000 francs. If we confine our desires to half a million, the probability that it will be left to us by some wholly unknown benefactor—not even related to us as closely as the proverbial American uncle—is even twenty-five hundred times as great as the chance of such a ticket-holder. Yet none of us would hope for this million or half a million and, still less, count upon it. In a single country, however, twelve million people were found who were willing to pay a franc for one chance in fourteen million of winning the prize, and based serious expectations upon it, although they were 437 or 2500 times less justified than any one among us, although we pay nothing for our chance of becoming a millionaire's heir. It is my opinion that instead of replying to the professional pessimists with reasons, we ought to send them as a final, crushing argument, a ticket to the "*Loterie des Arts*."

Let us reverse the circumstances. We all do things which expose us to the danger of death, with a proportion

of probability much larger than one in fourteen millions. On the railways of Europe for instance, one traveler in less than each fourteen millions is killed annually. Is any one sufficiently pessimistic to abandon the use of the railroad on this account? The fourteen-millionth of a possibility is evidently not enough to frighten us; but it is large enough to awaken hopes in us. Our mind is unaffected by so feeble an impression of disagreeable possibilities, while it is susceptible to the impression of agreeable ideas, no stronger in intensity. Why? Because, from its very nature, it has a tendency to optimism and not to pessimism.

We notice this in the greatest as well as in the smallest matters. Who among us would ever select a profession if we were not obstinate optimists? In every career, those who reach the front ranks are the rare exception. Out of fifty cadets, only one becomes a general; among a hundred physicians, only one becomes a professor; the rest remain in inglorious obscurity, frequently in poverty, and are obliged to contend with all the disagreeables of their profession as long as they live, without ever becoming acquainted with a single one of its agreeable and remunerative features. Yet when we come to choose a profession in life, we see only the successful one in the fifty or the hundred, and not the forty-nine or ninety-nine; and we are firmly convinced that we shall be this single one, although from the standpoint of every sober reasoner this seems extremely improbable. The case is precisely the same in regard to all our enterprises. Failure is, as a rule, quite as probable as success, and perhaps more so. Yet we do not hesitate to undertake the enterprise, and of course this is only because we have faith in its success. That which occasions the decision, which outweighs the figures of the calculation of probabilities, which draws the curtains

across the window that overlooks the probable unfavorable result, and hangs on the wall the picture of the far less probable favorable issue,—this is optimism.

Let it be well understood that this is true only of ourselves and our own affairs. When, on the other hand, we are giving another person advice in regard to his selection of a vocation, when we are judging of the prospects of another's enterprise, we can see the obstacles and the probabilities of failure very clearly, and are almost invariably inclined to pessimistic predictions. Why? Because then the purely subjective element of optimism does not delude our calm calculations and influence our judgment. We see the difficulties, it is true, but we do not see the energy which has resolved, and therefore hopes to overcome them. This energy is known only to its owner, and he therefore applies himself to any undertaking, and calculates its results quite differently from the spectator, who has only a profile view of the affair, and does not realize what an extensive front of attack is formed by our assurance and the consciousness of our own vital energy.

It is quite amusing to note that even the most inveterate skeptics have this subjective optimism, and betray it, often unconsciously, on every occasion. People who consider themselves irreclaimable pessimists, still feel a reverence for age, and a tenderness for childhood. Gray hairs impress them with the idea of wisdom and experience, and the infant, of promising development. And yet for the time being, the child is nothing but an unreasoning little animal that dirties itself and screams, an annoyance to every one around, while to the eyes of an unprejudiced observer, the old man is, physically, an unattractive image of decay, in disposition, a blind, inexorable selfishness without even the ability to be interested in anything but itself any longer, and, intellectually, an enfeebled, limited intelli-

gence, filled mainly with fallacies and prejudices, and closed to all new ideas. Why, nevertheless, do we regard age with reverence and affection, and childhood with tenderness? Because it pleases us to be able to create illusions for ourselves, and because both the end and the beginning of life, like the first or last chapter of a book, afford us the opportunity of composing the missing novel, as charmingly and as edifyingly as we choose, from our own materials. We give to the old man the past, to the child, the future of an ideal being, although the chances are a hundred to one that the venerable sage was a commonplace simpleton in his youth and manhood, an average individual deserving of no respect as regards his preferences and his failings; and that the child which is arousing such tender emotions, will turn out an unmitigated sneak in character, a grasping shop-keeper by trade, that he will lie, crawl, and slander his neighbors like nine-tenths of the people who swarm about us, and who inspire us with neither reverence nor affection. We only take cognizance of disagreeable facts when we actually run our nose against them, and not always even then. But where we are at liberty—as in the case of the old man or the child—in the absence of certain knowledge concerning the past or the future, to imagine it either beautiful or the reverse, we do not hesitate a moment, but improvise out of the old man or the child the dazzling apparition of a demigod, which is in reality nothing but the exaggerated illustration of our innate and heart-felt optimism.

Legends and fairy-tales, which embody in plastic form the ideas and opinions of the masses, bear a hundred-fold testimony to the irrepressible elementary optimism of the common people. I have shown above how unconcernedly each individual becomes reconciled to the awful idea of death. Men go still further—they make a virtue of neces-

sity, and invent some story which expresses the idea that death is a benefit, and that eternal life would be a dreadful misfortune. For this is evidently the moral to the legend of the Wandering Jew, who longs for death as a deliverance in his despair, yet cannot find it. Do not the inventors of these legends resemble the fox in the fable, who authoritatively asserts that the grapes beyond his reach, for which he is longing, are sour? Immortality is not to be obtained at any price, and it is, therefore, a terrible evil—this consoles us and the fiddler can begin to play for the dance. Or the pretty legend of the poor man whose cross oppressed him to such an extent that he begged for another in its place! His guardian angel led him to a spot where there were quantities of crosses lying around, large and small, heavy and light, with sharp and rounded corners. He tried them all in succession; none suited him in every respect. Finally he found one that pleased him better than any of the rest, and, behold! it was his own which he had wished to exchange for another. Then there is the comical story of the three wishes, according to which a poverty-stricken old couple, to whom some fairy had promised the fulfillment of any three wishes, had not sense enough to realize anything more than a sausage from this wonderful stroke of fortune. Under various forms and conditions these tales are repetitions of the sentiment that every one is charmingly situated as regards his surroundings, and that it would be wrong to wish for anything different from what he has; and that the hunchback is as fond and proud of his deformity as the guardsman of his imposing stature.

The truth is that optimism, an infinite, ineradicable optimism, is the base upon which all man's conceptions are founded, the instinctive feeling which is natural to him under all circumstances. What we term optimism is sim-



ply the form in which our own life-force, or vital energy, and the processes of life in our organism are presented to our consciousness. Optimism is, therefore, only another term for vitality, an intensification of the fact of existence. We feel the operation of life in every cell of our being—a fruitful activity which promotes continued movement, and warns us continually of it. We accordingly believe in a future because we are conscious of it in our inmost being. We hope, because we are convinced that we shall continue to exist. Not until this consciousness vanishes with the life-force or vital energy itself, does hope also grow dim and disappear, and the bright portals of the future close; but then the eye is failing also, and it is not able to perceive the disagreeable change. The ability of our organism to adapt itself to circumstances, without which ability it could not even exist, and its indwelling scheme of growth, which impels it to follow a predetermined course of development, these are the living foundations of optimism, which we have learned to recognize in our conforming to settled conditions as well as in our looking forward with hope to the future. Valiant striving toward the goal of our development, the triumphant maintenance of our individuality in the presence of hostile influences, movement, progress, hope, life,—these are all only synonyms for optimism. The old Roman who coined the saying: "*dum spiro, spero*," "as long as I breathe, I hope," succinctly expressed in it the philosophy of life, and gave to one of the fundamental truths of biology the form of a classical proverb.

## MAJORITY AND MINORITY.

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The Philistine is the bugbear of every superior mind. Every one who can detect the slightest trace of genius in himself, though barely enough to justify him in wearing his hair long and condemning the popular prejudice in favor of the stiff hat—is bound to exercise the muscles of his arm pounding away on the head of the Philistine—of course only figuratively, for, as a rule, the Philistine has a man servant, if he is not one himself. This hostility is sheer ingratitude. The Philistine is useful and has even that relative beauty which belongs to all things perfectly adapted to the end in view. He is the perspective background in the painting of civilization, without whose artistic smallness of dimensions the full length figures in the foreground would not give the impression of size. This is his aesthetic rôle, but this is far from being the most important one he is commissioned to play. When we admire the Pyramids—I am sure I do not know why the Pyramids have come into my mind again—perhaps it is owing to the fact that from their shape they seem to be especially adapted for the fixed points in mental calculations—do we not say to ourselves that we owe them to the cruelly misrepresented Philistine? It was probably some talented civil engineer of ancient Egypt who first designed them, it is true, but they were built by the Children of Israel, notwithstanding the fact that these latter must have been very common creatures, if we can judge of their character

as a whole from their acknowledged taste for onions and flesh-pots. Of what benefit to us are all the conceptions of the man of genius? They live only in his brain and for himself alone—they do not exist for us, until the uninteresting Philistine in his cotton night cap has come along, and made them a reality—this kind Philistine, who does not distract his docile attention by any inventive activity of his own, but waits in an inviting state of intellectual blankness for the impulse, the ideas and the orders of those abler than himself.

Those who can compose consider themselves as a rule, above translating, and rightly too. It is the task of the inspired few to think and will; it is the task of the mediocre multitude to transform the thought and the will into concrete reality.

Of what else do we accuse the Philistine? That he does not yield readily to the impulse of genius. This is very desirable; he ought to be especially blessed on this very account. His weight, his firm equilibrium, which is not easily shaken, make him a kind of gymnastic apparatus upon which the superior nature has to test and also to develop its strength. To be sure, it is difficult to set the Philistine in motion, but it is good exercise for genius to exert itself thus until it succeeds. If a new idea is not able to master the Philistine, this evidently proves that it is not strong enough, or that it is of no value, or of no value as yet. But, on the contrary, when a new conception operates upon the Philistine, it has already passed the first and the most important test of its worth. With his intellect he is of course incapable of criticising and passing judgment upon the ideas of the inspired few, but on account of his conservatism he is a contrivance which unconsciously, and therefore all the more infallibly, sepa-

rates the fully developed and live ideas from the immature and worthless. We could easily understand it if the Philistines complained of or ridiculed each other, if one Philistine cast this nickname with contempt at the head of another, as a black man calls another a nigger when he is angry. One Philistine can not get on at all with another, in fact. He has neither impulse nor entertainment to expect from him. Each one sees in the dull face of the other the mirror of his own limitations. Each one yawns at the tiresome recitative of the other. When two of them are together they are mutually shocked at the frightful emptiness of their minds, and they have that depressing and humiliating consciousness of helplessness experienced by the man accustomed to be led, when his leader fails him. But men of ability ought to glorify the Philistine. He is their fortune, the soil that yields them nourishment. To be sure it is hard to work, but think how fertile it is! They must toil hard to make it productive, they must plough from early till late, they must subsoil plough it, dig, break, turn, harrow, rake, hoe, cut; they must perspire and freeze, but the harvest will not fail them if the seed had the requisite vitality. If imperfect grains or pebbles are sown, of course no successful results need be hoped for, any more than if date stones were to be entrusted to a stone breakwater. And if the soil remains unproductive with such tillage, it is not the fault of the ground but of the foolish dreamer who attempted it. Judgment must assist genius in indicating the proper time and the proper place for the utterance of its ideas. Only as it shows tact in selecting time and place, will it find the crowd of Philistines always ready to respond to the seed with the harvest. As often then as men of genius are assembled around the festive board, their first toast, in all justice and propriety, should be the Philistine.

What is, after all, the great cause of complaint against the Philistine? That we are not obliged to seek in order to find him; that he exists in enormous numbers; that he is the rule and not the exception. If we were to consider him for once alone, without regard to the proportions of the numbers in which he is distributed, we would have to acknowledge, if we were just, that he is quite a nice fellow after all. He is usually better looking than even any of the best looking monkeys, although he is not so handsome as the Apollo Belvedere, which would be common-looking also, if it represented the average type of humanity. He is far more active than even a trained poodle, although he does not equal a circus acrobat, whom we would likewise consider clumsy, if every farmer's lad could stand on his head and turn somersaults in the air, instead of shambling along on his two legs as he does now, or could pin flies to the walls with his rapier, as he now builds haymows with his pitchfork. It frequently happens that he has quite a good deal more sense than an oyster, or even than the intelligent elephant, even if he does not think so profoundly or so clearly as Darwin, whose genius however may be rated by the philosophers of the future no higher than we esteem the physiological theories of Parmenides or Aristotle. When we say Philistine we mean simply the majority, and if we despise the majority, we are rebelling against the fundamental principle—in theory—of all our political and social institutions.

It is true there are many people who are not at all shocked at this idea, but, on the contrary, affect or are sincere in feeling a preference for it. I hate the common herd and keep it at a distance, they say with Horace. They give it expressly to be understood that they belong to the minority, and pride themselves upon this. They assert that they feel differently, think and judge differently

from the common herd—or rather, to express it in a less contemptuous manner, the majority. Nothing would seem more of an insult to them than for any one to call them “common,” which after all would be only saying that they resembled the majority. We shall soon turn our attention to the problem of the cause of this disdain of the majority, and whether it is justifiable or not; but first we will see whether these superior beings who protest against being included in the crowd, think and act consistently. If they were logical they would have to make the points in which they differ from the common herd especially prominent, and try to prevent any one's confounding them with the majority, by manifesting their peculiarities; they would have to appear in different styles of clothing and adopt different manners and customs, and different conceptions of morality, and invariably refuse to accept the decisions of the majority. Do they do this? No; in fact they do the exact opposite of all this. They consider it better taste not to attract attention, that is, not to be distinguished from the despised multitude. They bow to public opinion, and grieve when they know that it is against them. They are the strongest upholders of the law, which is after all nothing but an epitome of the ideas of the people, that is, of the majority, in the form of laws. They defend parliamentarism which is founded upon the recognition of the right of the majority to enforce its will upon the minority. In many cases they are even enthusiastically in favor of universal suffrage, which is in reality the apotheosis of all that is common and ordinary. I do not overlook the fact that we often float with the tide—not that we really wish to go in the direction it is carrying us, but because we are not strong enough to struggle against it. The author of the proverb, “When you are with the wolves you must howl as they do,” did not mean to express by it any especial

respect for the wolves, but merely a cruel necessity. But another proverb declares that the voice of the people is the voice of God, and plants the Philistine on Olympus. And it is an unquestionable fact that the most important acts and decisions, even of those who scorn the masses the most, are always based upon the tacit assumption that the opinions of the crowd are correct and worthy of respect in their main features.

It is true that a few individuals, so few that they can be counted on the fingers of one hand, have had the courage to be consistent. Treitschke endorses an enlightened despotism, that summary system of government which pays no attention to the majority and claims the right for the minority—reduced to unity—to think and decide for the whole nation. Carlyle preaches the worship of heroes, and insists upon the unconditional subjection of the masses to the rule of the single and powerful individual. Montesquieu wittily asserts that the trial by jury is only proper under one condition: viz, that the ideas of the minority, not of the majority, be accepted as the decision, as among the twelve sworn in there must necessarily be more blockheads than men of sense, and consequently the decision of the minority will be the decision of the sensible men and the decision of the majority that of the blockheads. This is rather a severe way of expressing the idea that intelligence is only the attribute of the few while the masses are foolish and contracted in their ideas. Montesquieu overlooks the fact, however, that the minority, as it includes all who vary from the average size, contains not only those who rise above the average height, but those who fall below it as well—consequently, along with the geniuses, the imbeciles, along with the healthy individualities, the diseased and abnormal forms. The members of the Academy are an insignificant minority in the nation, but so are the in-

mates of the State Insane Asylums, and Montesquieu is in danger of claiming for one scientist and a couple of idiots the supremacy over nine average Schulzes or Muellers, which would be absurd, as Euclid would say.

I have a strong suspicion besides, that Carlyle and Treitschke do not scorn the majority after all, as much as they pretend, and as they may imagine they do. An enlightened despotism! Hero-worship! Hm! Let us examine them closer: Does not an enlightened despotism mean that some ruling genius is to coerce the masses into agreeing with his views and intentions, adopting his opinions, coinciding with him in everything, and thus finally establishing an unanimity of convictions between himself and them? And hero-worship, is not this the desire to see the hero, that is the exceptional phenomenon, appreciated, honored, worshiped, by his god-parents, Hinz and Kunz? They all seem to me to have the masses continually in view after all, which does not at all agree with their pretended contempt for them. Why should the scorner of the Philistine care for his opinions? What good will the Philistine's appreciation and admiration do him? The logical consequences of Treitschke's views would be that a Frederick the Great, a Joseph II, would have to resign and hand over his crown to some honest mediocrity in the family, for he is above yielding to the rabble; he can not have any rational interest in converting blockheads to his exalted views, and he does not care to cast his pearls before swine. From Carlyle's point of view it would be a degradation for a Michael Angelo to exhibit his Moses to the loungers on the street, or a Goethe to have his Faust printed for the use of the young ladies' seminaries—the applause of the common herd, instead of being desired by them, ought to give them cause for alarm, like that really consistent orator who exclaimed: "They are applauding—

have I said anything silly?" Let a Frederick the Great, shut himself up in his palace grounds, then, have nothing whatever to do with the people, let a Goethe retire to a desert isle and recite his verses for his own ears alone, and hurrah for Logic!

We have here a contradiction that cannot be denied. On the one hand we assert that we despise the masses, on the other hand all that we do is done with them in view. We refuse to believe the masses capable of passing judgment upon the productions of genius, and yet the fairest dream of genius is fame and immortality, that is, appreciation by the masses. We deny that the masses have intelligence, and yet representative legislation, trial by jury, and public opinion, all institutions regarded with the utmost respect, are founded upon the assumption that the majority is not only supreme in its wisdom, but even perfectly infallible. We look upon being classed with the masses as a degradation, and yet on all momentous occasions we are proud to feel and think with the crowd. At a moment of sublime exaltation the Roman of old could think of nothing nobler to say than: "I am a human being; nought that is human can I consider foreign to me." He would have been much astonished perhaps if some cynical contemporaneous critic had said in reply: "You say you are a human being like other human being—are you thus congratulating yourself upon being common?"

Now then: I believe it is in my power to explain this inconsistency. It seems to me beyond all question that it is due to a biological cause. The unknown power that evolves living creatures out of matter, does not produce races but individuals, at first. I will not discuss here the different theories in regard to the beginning of life, and will also waive the question as to whether, as is currently

accepted, living protoplasm was evolved from the inanimate matter at a given period, or whether, as Preyer believes, life has been one of the attributes of matter from all eternity, like motion and attraction. Suffice it to say, that the formation of a living being evolved from matter today, has its impulse in other living beings that have preceded it and from which it is descended. Life, in its final analysis, is the formation and decomposition of certain albuminous compounds of nitrogen, in combination with oxygen. This process can take place under the most varied forms, and whenever nature undertakes the task of constructing a living being, (I express myself thus unscientifically, anthropomorphically, merely for the sake of convenience), it has the choice of giving it any one of the billion or trillion conceivable and possible forms. If thus nature should form the living beings anew out of primeval matter each one would probably turn out entirely different from the rest, and there would be only that faint resemblance between them due to the circumstance that they would all be in the end the expression, the embodiment of one identical chemical law, the organ of one and the same function. But living beings are no longer created out of primeval matter, by some spontaneous action of nature, at least as far as our knowledge extends,—they are created from it by the intervening medium of a parental organism. The matter of which the new being is formed has passed through an existing mechanism; it has been controlled by the latter; it has thus received impressions from it. It is, however, one of the still unexplained and yet hardly to be questioned properties of matter, or, to be more exact, of the combinations of matter, to retain the impressions, groupings and shapes it has received. This is the foundation of memory in the individual, of inheritance in the race. The new being, the elements of whose substance



have been manipulated by another being, will thus retain the impressions left upon them by the latter; it will become similar to it. Consequently, two separate laws are working in it: first the primal law of life, which tries to produce an organism separate and distinct from all others, that has only to perform well its task of forming and decomposing the albuminous combinations of nitrogen, and can do this in any one of the innumerable possible forms, while it need not necessarily resemble any other given form, and secondly, the law of heredity, which tries to make the new organism resemble the parents from whom it was evolved.

Each individual is therefore the result of the operation of these two forces—the primal law of life, and the law of heredity. The former seeks to create new forms adapted to the process of life, and the latter to repeat a design already existing—that of the parents. I can not sufficiently emphasize the fact that, in my opinion, the infinite freedom of choice among all the forms possible, came first, and was followed by the similarity to the parental form, restricting this choice. Not until this is accepted, does the Darwinian theory become clear and plain, which without it is not a revelation, but merely a record of facts observed.

In short, if, as Darwin and with him the whole tribe of his disciples and commentators believe, heredity be the earliest and more potent law deciding the development of the individual, how would any deviation from or improvement upon it be conceivable? The offspring would have to retain its resemblance to the parent under all circumstances, and if its surroundings made this impossible for it, it would simply have to perish. The grand phenomenon of adaptability to given conditions of life, which, according to Darwin, is one of the principal causes of the origin of species, would be a problem still unexplained.

My hypothesis, on the contrary, offers the solution to this problem. The living being, I say, is confined no more to one form than to another; it only requires a form that will make the absorption of oxygen and the formation of protein possible to it. It is this very primal, unconditional freedom which allows it to assume any form that may be impressed upon it by its surroundings, as a floating body at rest will move in that one of all the directions possible to it, in which it is impelled by the slightest impulse from without. Does the parental organism give it its own form? Very well, then the young organism will assume the parental form. Do the external conditions in which it has to live try to alter this form, to abolish this resemblance to his parents? Very well, then it will relinquish the inherited form, and, yielding to the later impulse, assume that which the external conditions of life are trying to force upon it. In this way we can explain adaptability which, according to this theory, is no longer a contradiction but an analogy of heredity.

Biology, the science of life, recognizes the individual alone, not the species. The individual alone is something actually existent, independent, clearly defined; the race is much more indistinct, it is often impossible to define it with certainty. Two individuals can never be confounded with each other, nor merged into one, never under any circumstances. This can not be said of species; on the contrary, they are changing constantly, although slowly; their limits vary and become confused almost beyond recognition, they develop into new forms and are something entirely different in one geological period from what they were in a former, and probably also from what they will be in a future period. That which binds the individual to the race, notwithstanding this, is the law of heredity, that is, the primal attribute of matter to remain in the form which

it has once received, and not to change from it except under the compulsion of a new impulse, more powerful than its tendency to conservatism.

The present economy of nature seems to recognize only the evolution of life from life. In theory it would be possible to conceive of life as being evolved anew again and again from inanimate matter. That this does not happen is probably owing to the fact that life can be evolved through the intervention of parental organisms with less expenditure of force than would be necessary in the combination of primeval matter, and that it is a well known trait, characteristic of all nature's processes, that it seeks to attain all its aims with the greatest possible economy of means to ends, the least possible expenditure of force. We have thus the logical sequence of the phenomena of life: the real scene in which they appear—the form—is the individual, not the race. That individuals do resemble each other, and that the race has a semblance of permanence, are the results of two causes: first, that at present, as far as our knowledge extends, life proceeds from other life alone, and secondly, the operation of the law of heredity explained above.

Descent from a parental organism produces similarities and a certain attraction between individuals; the primal law of life produces differences and independence. In fact, no two individuals exist exactly like each other in every particular, and probably there is incomparably more difference between the internal and most secret chemical formations and mechanism of the elementary component parts of each separate individual, than between races. This explains also the possibility of egotism, which would be inconceivable and inexplicable, if we had to consider the race as something actually existent and not merely an abstract conception of the human mind. The individual

feels at first that he is the only thing existing and the only actual reality, and not until he has received a higher training does he become aware of the fact that certain necessary relations exist between himself and the beings like himself, and that by a certain regard for them, he promotes his own interests. The sense of fellowship is thus not an original impulse like the sense of individuality or egotism, but is the acquired knowledge that altruism is not contrary to, but is a deepening and a broadening of egotism. In this way man attains to the ideal institution of "solidarity," as he has attained to the material institutions of the police and the land title books: by a realization of their usefulness to him.

And now the whole of this biological disquisition, which may have seemed to the reader a deviation from my course, fits into the frame of the present argument. The law of heredity is the cause of all that is common or stereotyped; the primal law of life, of all that is uncommon or original. The lowest processes, which are at the same time the most necessary, and therefore the most frequent, and which the father and ancestor must certainly have performed likewise, fall under the law of heredity; the higher and highest processes, on the contrary, which are seldom required and which the progenitors perhaps never had to perform, or at most, so few times that they failed to leave an impression upon the organism deep enough to be transmitted to posterity,—they are performed independently and with originality. The organism will proceed in the common way in a situation of frequent occurrence, and which is the same for many or for all. But in a situation which presents itself to it for the first time, it will be original if it can not escape from it. The grandest genius as well as the most insignificant individual eats with his mouth and hears with his ears, and the French

poet hit the nail on the head when he said: "We are imitating somebody whenever we plant a cabbage." Those processes which are alike for all, are performed by all alike. But a difference will be seen at once when two men are placed at the head of some company, like that of the Pilgrim Fathers for instance, who set sail for America in the May Flower, to found a new social system, or if the task of conquering an unknown world, and constructing a state from its very foundations, is imposed upon them.

An organism supplied with only the average amount of vital power, never gets so far as to be obliged to undertake the higher and highest processes. It seeks no situation to which its progenitors were not accustomed. If against its will it is placed in a novel position, its first efforts are to escape from it. If these are not successful, it endeavors to act according to customary analogies, that is, to do in it as it has been in the habit of doing in other and familiar situations, which have a resemblance to the new situations. If by these petty means of escape, it still fails to accommodate itself to the new demands, it submits to their sway, and succumbs. Thus it always remains within the established circle of heredity; it is horrified at the slightest alteration in the lines of its resemblance to its progenitors and comrades in mediocrity, and it concludes its life as it began it, a tame copy of forms that had preceded it and surrounded it. But an organism whose vital energy surpasses the average, either feels at once an impulse to seek new situations, or if it is established in them, it conquers them at once, or else accommodates itself to them without paying any attention to given examples, or being influenced by the customs of its progenitors. Such an organism grows triumphantly up to and beyond the limits of heredity—which only reach to a certain height—and in an altitude never attained by feeble

individuals, it develops unrestrained into original forms, differing from all the rest.

I have thus explained in detail how individual forms and average forms depend upon the amount of vital energy possessed. If an individual has only sufficient vital energy to make an organism of an already determined type, it remains within the inherited form, and assists the race in maintaining the inherited and distinctive features. If, on the contrary, the individual possesses an extra amount of vital energy, it conquers the inertia which keeps the component matter in the inherited form, and, by its original and innate impulse, develops in perfect freedom its individual plan of growth and outward form, and we can even go so far as to assert that it thus becomes the source of a new variety or sub-species in the race. Life is the most sublime function of matter. The possession of it inspires instinctive respect in all living beings, as pecuniary wealth inspires respect in common natures, and because an original type is the result of a greater wealth of life, it is considered superior to the average type, which is the confession of only a small fund of vital energy. Hence we look down upon everything that is common and ordinary, and strive to be original, or if this is beyond our powers, to appear so at least. Those who do not want to be included in the common herd are those who want to have the reputation of being millionaires in life-force. Contempt for the Philistine is one of the ways in which we express our admiration for life. We pride ourselves far more upon being the founder of a race than one of the descendants, the original copy rather than an extract, and consider it far better to be the title page of a book, rather than one of the numbered pages bound in it. But as even the most vigorous father is a son at the same time, and each founder of a new line has had progenitors and ancestors as far back as



the ascidia or primeval matter, even the most original individual belongs to the race after all. Even the most extraordinary manifestations of life-force are included in the limits of what is stereotyped and ordinary, in so far as their more common actions are concerned. We have in this the solution to the problem of the contradiction between the withdrawal of superior natures from the common herd, and their occasional blending with it. If the Philistine chooses he can congratulate himself upon the fact that even a Goethe or a Napoleon, with all their originality, did not weep and laugh, sleep and shave any differently from what he is in the habit of doing.

Among those living beings divided into sexes, the female seems to have less life-force and its concomitant creative impulse than the male. Why this is so I can not say, but it is a recognized fact that this is the relative proportion. Darwin has collected several hundred pages of separate observations (in his *Descent of Man*), which go to prove that in most races of animals the female maintains the type of the species, while the male differs from it individually, often to quite a considerable extent. The female is governed thus by the law of heredity, the male by the law of original formations, which I claim to be the primal law of life. It is the same in the human race. Woman is as a rule, typical; man, individual. The former has average, the latter exceptional features. This idea is certainly contrary to the one generally accepted, but the one generally accepted is erroneous from beginning to end. This is due to the fact that we have obtained our ideas of woman from poetry and fiction. The poets, in their portrayal of womankind, have been impelled not by a spirit of honest observation, but by an unconscious spirit of gallantry. In polite literature woman is not a sober zoological description, but the ideal creation of some impassioned

male imagination. The poet is not delineating, but wooing. When he speaks of woman he is not an impartial observer, but instinctively a suitor for her favor. This utterly prevents all clear observation, and it can be safely asserted that in the poetry of all peoples and of all ages, woman is portrayed, not as she really is, but as she appears to the eyes of an infatuated idealist. This is a natural consequence of the fact that poetry was originally composed by men alone. If women had invented the lyric and the epic, the portrait of woman in literature would most likely have been drawn impartially, and, therefore, rather unflatteringly. At the present day, when novel writing has been relegated almost entirely to feminine hands, at least in several countries, the fair authoress repeats the idealized portrait of woman drawn by man and handed down to her, simply because she is incapable of rising above her precedent, and imagining anything novel for herself. "Woman is as changeable as the tide, and of infinite variety," we are informed by some contemplative wiseacre. "Who can boast of having understood woman!" exclaims some sentimental poet, casting up his eyes, and smacking his lips at some delightful idea. "Every woman is a mystery and an enigma, and not one of these sphinxes resembles any other one," asserts some novelist, and to illustrate his ideas, he spins us a yarn a yard long about robbers, etc. But these are all empty phrases, at which sensible women laugh most of all, and which please none but the silly geese who regard them as personal compliments. There is incomparably less variation between women than between men. If you know one, you know them all, with but few exceptions. Their ways of thinking, of feeling, and even their physical appearance are typical, and Marguerite, Juliet, and Ophelia resemble each other so closely that they might be taken for sisters, with a

slight difference in their dispositions and training. This is the explanation of the fact that women adapt themselves so readily to all social positions. The scent of the stable will cling forever to the groom promoted to be Duke of Curland by the favor of an empress. The drum-major's daughter who has become a countess through her sovereignty over some king's affections, after a few months, and sometimes but a few weeks, can not be distinguished in any respect from a lady born for the *Almanach de Gotha*. There are no female parvenues. As soon as a woman has adapted herself to her new rank in life—and this she does with marvellous facility, owing to her talent for externals and details—she is completely at home in this new social position; for between the princess and the washerwoman there is but a very slight difference in fact, the essential substance of each being their womanhood, that is, the automatic reproduction of the general features of the race. Michelet has embodied this philosophy in regard to women in a single sentence, which he evidently thinks is very strikingly expressed: "Woman is a person." This is one of the greatest errors of this fiery and impressive but superficial author. The reverse is correct: Woman is not a person, but a species.

It is true that there are some original women. But may I offer you a bit of advice, dear Reader? It is this: Beware of the "original" woman! A deviation from the type, in woman, is in eighty cases out of a hundred, an indication of disease. The original woman differs from the average woman just as a consumptive differs from a person in health. And in the remaining twenty cases, which I can not call disease, the eccentricity is due to a mistake in the sex of the intellect. What I mean by this ought to be generally understood. A woman has the body of a woman, but the character, the ideas and tastes of a man, or vice versa.

The German popular term for an original or strong-minded woman, a man-woman, is on the right track. This term contains the explanation of the phenomenon. As soon as a woman begins to deviate from the uniform type she loses the most important of all the psychological evidences of her sex. As a proof of the truth of this statement, I can refer to the fact that strong-minded women are attractive only to men of a feeble individuality, while men of clearly defined originality prefer to be and are attracted by the average type of womankind. This occurs so frequently that it is superfluous to mention in illustration the names of Goethe, Heine, Carlyle, Byron, Victor Hugo, etc. That is, in brief: those men who do not already possess life-force or vital energy sufficient for the creation of new forms, unconsciously seek to obey the primal instinct of their organism—to assume and develop into an original form—by a union with a woman more abundantly supplied with vital energy than they are themselves, while men more lavishly endowed by nature are not obliged to do this—their own originality is sufficient for them.

Woman's typical character is responsible for her hopelessly commonplace tastes. It is true that any unusual masculine appearance—whether what is unusual be physical or mental—attracts woman's fancy and has an intense fascination for her. But what does this prove? Merely that what is novel attracts the attention and interest of woman just as of all the higher animals. But her fundamental instinct impels her irresistibly toward what is stereotyped. The perfect specimen of the average man, who does not vary from the type by too striking stupidity nor extraordinary brilliancy, who keeps to established precedents in his compliments, and gives the weather due consideration in his conversation, who cherishes the ideals inculcated in the public schools, and has the proper dread of the duly

accredited black man, who shares the opinions and sentiments of his more affluent fellow-citizens, and keeps up with the times in the shape and color of his cravat, this masterpiece from the hand of a Raphael of the stencil, will turn the heads of ninety-nine women in a hundred, and no bold, free hand drawing of a higher type of human development has a chance beside it.

In the course of centuries one woman may be born who has ambition. Pray do not confound this noble sentiment with that vulgar vanity which likes to parade as ambition. Intriguing women who love power, actresses, fashionable women, priestesses of society who like to shine, sometimes imagine that they are ambitious. But they are not so in the least. The question with them is merely the immediate effect produced by their personality—they love to procure for their ignoble egotism the satisfaction it experiences when they are universally considered beautiful, or elegantly dressed, or intellectually brilliant. They want to be envied by other women, to have men at their feet, to have people turn to look after them on the street, and opera glasses directed at their box in the theatre, all that is important to them is the simplest and most superficial manifestations of local celebrity. Ambition is something entirely different from this. It is the irresistible impulse to incorporate one's own personality in some production, some achievement which will ensure its continuance far beyond the corporeal span of existence of the individual. It is a passionate resistance to the universal decree of transitoriness, the sublime desire to maintain our individual being—which we experience and recognize as fully justified, as powerful and necessary—in its special form and compel nature herself to respect and spare it. What we call ambition proceeds from the primal law of life, and is its supreme manifestation. It not only impels

to the creation of original organic formations, which have only to be themselves, with no resemblance to any others, but also to the attempt to preserve these forms, to ensure their perpetuation, and if possible, their development into a new species. Ambition is founded upon an abundant supply of life-force, such as women rarely have. They therefore dream of conquests, but never of what we call immortality. They think only of society which can tell them scalding hot at the time: "Madame, I love you!" The unborn generations of the far-distant future, whose homage and bouquets can not reach them, do not attract their coquetry. The longing to diverge from the race, and found a new species, of which she would be the primal type, is never experienced by woman.

The predominance of the law of heredity in the female organism explains also all the rest of woman's peculiarities of mind and character. She is almost invariably hostile to progress, and is the staunchest upholder of conservatism in every form and on every field. She clings passionately to all that is old and traditional, and considers what is new—except it be some fashion, by which she hopes to increase the effect produced by her physical appearance—a personal insult. Servilely repeating what has been done before her, in her mental world religion is transformed into superstition, rational institutions into external forms, actions replete with meaning into empty ceremonies, and the rules for social intercourse, prompted originally by a considerate regard for our fellow-beings, into a tyrannical and silly code of etiquette. She is a mental automaton—with the rare exceptions which I have conceded above—which must go till it runs down, the same way it was wound up—with no power in itself to alter the mechanism of its works.

Now that I have described in detail my biological

foundation for all that is common and stereotyped in man, my conception of the limits of originality follows as a matter of course. Its right of way is unlimited subjectively; objectively, it is circumscribed. When I am alone, I can be original; when I mingle with the crowd, to be commonplace is my first duty as a citizen. Those thoughts and actions which concern the individual alone, are free from the restraints of custom, but those actions which trespass upon the circles of others' lives, must conform to the rule of common tradition. By the operation of the primal law of life, I am an original, independent individual, a species unto myself, not exactly resembling any other being, and developing according to a design peculiar to myself alone; but by the operation of the law of heredity, I am connected with the race by a certain extent of my surface, to those beings who resemble me in consequence of having the same genealogical derivation, and this part of my surface is withdrawn from my free personal jurisdiction. In this every one of us resembles the Siamese Twins. Each head can think for itself, can be merry or sad as it likes, wise or silly as it is provided with brains; but in walking or sitting down the two bodies must act in concert. These truths have a broad application. They vindicate the right of universal suffrage. They bow in homage to the principles of democracy. They are the foundations upon which the supremacy of the majority, in all matters concerning the state and community, is based. My mental horizon belongs to myself alone; within its limits I am not obliged to endure anything that disturbs or displeases me, and I can kick my neighbor's cotton night-cap, the tassel on which rises presumptuously before me like a forest-crowned mountain peak, out of and beyond my horizon. But the street, the city, the country, belongs to us all together. Here you are my brother, honorable Phillistine.

Here I am obliged to read your wishes in your eyes. Here I must not do a single thing that will interfere with your comfort, and when I want you to do me a favor, it is my disagreeable duty and obligation to tell you of it in terms that you will not mistake, and bring reasons to support it that will convince you.

It follows that an original politician, legislator or statesman is not wanted. The more commonplace each one of them may be, the better for him, the better for his nation. Any one called upon to construct institutions for the people, in which the masses are to live, must take the measure of the masses, and not of the few. The regimental tailor works from average measurements, and not according to the physical proportions of some guardsman of his acquaintance of an especially fine physique, and what the consequences are when the fox invites the stork to dinner and places the food before him in the family dishes, can be read in Schiller's significant fable. The natural workings of our faculties prevent besides, any originality in our treatment of the affairs of humanity or the nation. It does not require any special intelligence nor special acuteness to remark that every large assembly is hopelessly mediocre. Collect four hundred Goethes, Kants, Helmholtzes, Shakespeares, Newtons, etc., together, and have them discuss and decide upon concrete matters—their speeches will be perhaps—and even this is not certain—superior to those of any ordinary convention, but not so their decisions. Why? Because each one of them, besides his personal originality—which renders him the distinguished individuality that he is—has the inherited attributes of the race, which he shares not only with his neighbors in the assembly, but with all the nameless pedestrians on the street. We can express this mathematically by saying that all normal human beings possess a certain something

of equal value in common, which we will call *a*, and the prominent characters a certain special something besides, different in each individual, that we will have to designate in each respectively, as *b*, *c*, *d*, etc. Suppose then, four hundred men assembled together, even if every single one be a genius, they could only be designated as 400 *a*'s, with one *b*, one *c*, one *d*, etc. Then no other result would be possible but that the 400 *a*'s should score a brilliant triumph over the one *b*, *c*, *d*, etc.—that is, that what is common to them as humanity, would put what is individual to flight, that the cotton night-cap would knock off the professional silk hat. It is impossible to add things that are unlike together; this we learned in the primary school. Consequently a combination of blockheads is conceivable, but not a combination of men of genius. It is possible to obtain a vote of the majority in regard to the flavor of sauerkraut, but not upon the value of abstract theories. If these latter were put to vote, it is likely that one ballot would be cast in favor of each theory: that of its originator.

The Philistine is thus actually lord in the land, and the most stiff-jointed genius has to keep time with him in the dance, when the "all hands round" is played. The substance of all our public institutions and of all our politics, is not the intellectual production of a John Stuart Mill or a Herbert Spencer, but the stereotyped ideas of the honest Kunz, who can not make out the contents of his local penny sheet without the assistance of his forefinger in following the lines; and even the most original genius loses his identity and disappears beyond recognition in the long procession when the masses take their turn in line at the polls on election day.

Must, therefore, the man of genius refrain from proclaiming ideas deviating from all those hitherto known and accepted, and relinquish his efforts to convert the

Philistine to them? By no means. He must not do this; in fact he can not do it. For we have seen how each original type has an inherent, uncontrollable impulse to force itself upon the masses and shape the latter after its own pattern. But that from which the man of genius must always refrain, is to present his views as commands, and to expect the noble army of Philistines to turn at his word like a well-drilled regiment. He must preach, not command. There is an immense difference in this; all the difference between the missionary and the general. I observed not long ago that the Philistine is the talented man's grain-field. This illustration seems to me so fitting that I make use of it again. The original thinker has to practise husbandry in a rough way, just as the educator of children practices the science of fine gardening. The latter grafts on young wild trees, cultivated slips which have grown on other and older trees of a better quality, the former sows his seed with broad sweeps of his arm, and after thoroughly fertilizing and harrowing the land he waits patiently until, after months of silent germination, the grain shows its head above ground. The whole thing is only a question of time. An average man likes to inherit his ideas, and not work them out for himself. We have only then to impart to one generation what we want to have become the common property of the succeeding generation. Those thoughts and trains of thought which our father and grandfather have had in their minds, and which have been repeated over and over again for generations, become in time a component part of our organism, become absorbed into it, and it requires no more effort on the part of the individual to think them, than to eat or to sleep or, that is, to perform any other function that has become organic. Novel ideas and trains of thought, on the contrary, which appear to the individual for the first



time, throw the whole of his thinking apparatus out of gear, and make new institutions necessary to their reception, and compel the attention and intervention of the will and the consciousness. It is like weaving by machinery. When an old design is being woven, for which the loom has been properly arranged, and in which the workman is already experienced, everything works smoothly and as if by magic. The loom-tender can dream the time away without necessity for thought, while the cloth grows yard by yard. But if a new design is to be followed, the loom must be rearranged for it, the belt tied up differently, the shuttles arranged to run in a new way, the superintendent must be on hand and take hold himself, the loom-tender has to arouse himself from his comfortable doze and oversee matters—in short, the work no longer goes on by itself, but requires a head and hands to accomplish it. Men of the average type are arranged for organic intellectual work and can not perform any other. They are not strong enough nor skillful enough to alter their loom to fit a new design. The superior mind has not only the task of inventing the new designs, but of rearranging all the looms in the immense factory we call humanity, even to their smallest details, so that they can proceed to weave the new designs as they had previously been weaving the old. The masses resist the introduction of new thoughts, not because they do not want to think them, but because they are not competent to think them. It requires an effort, and every effort is painful, and we avoid what tends to cause pain.

This seems to contradict the assertion that the masses are eager for novelty, and that everything new finds a ready acceptance. But this contradiction is only an apparent one, as a brief consideration of the subject will soon show.

Nothing reaches our perception or consciousness except the changes in our nervous system. When there is nothing stirring in the nervous system, neither is the thinking and feeling Ego conscious of anything. The arrangement of the news department in our organism is not that of a vigilant superintendent in chief, stationed at the central point of the Ego, who despatches messengers into the anterooms and outer courts at brief intervals to ascertain if anything new is occurring—the superintendent remains immovably at his desk in the inner office, where centre all communications from without. When no messages are being received he remains quiet, and may even fall asleep—at any rate, he gives no sign of life. But when the news comes from without: "Some one is knocking at the right hand gate!" or: "A stone has been thrown against the window in the upper story!" or: "The sentinel in the outer court is receiving a supply of provisions!" or anything of the kind, the superintendent wakes up and replies at once with a message that the intelligence has been received and duly noted, or else with some command ordering what is to be done on the occasion of the occurrence just announced. If we could conceive of such a thing as the world's passing suddenly into a state of complete immobility, our nerves would remain in the condition in which they are at the time; there would be nothing to incite them to action, nothing to excite them, nothing to produce any change in them, which could be perceived by the consciousness. Our eyes would not see; our ears would not hear. The sentinels would still be stationed at the outer boundaries of our personality, but there would be nothing for them to notice, nothing for them to report. Neither would we think, and our consciousness would be sunk in apathy, as in a dreamless sleep. To feel as thus to become cognizant of the fact that the present con-



dition of the nervous system is undergoing some alteration. The interval, almost too brief to be noted, between the cessation of one condition and the commencement of another, is really the sole substance of all our perception and consciousness. Hence it follows that man, in order to think, in order to become conscious of his Ego, must first receive some impulse from without; this impulse or excitation, however, can only be caused by some change, viz., by something new. And as the consciousness of one's own Ego is the necessary prerequisite to all agreeable sensations, and is, in fact, a delight in itself, perhaps even the most intense of all delights possible to the organism, it follows that everything that is new, differing from the preceding, a change, which by exciting the nerves becomes the source of consciousness, is experienced as something agreeable and ardently to be desired. But to have this change experienced as something agreeable, it must not be abrupt and violent. That which is new, which is to excite the nerves, must differ very slightly from the old, from that which preceded it, by merely a degree, a shade only. It must be the neighbor of the old, and appear as only the continuation of the latter. To illustrate this with a familiar instance: a new shape to the dress coat will readily become the fashion if it leaves unaltered the outlines of the present style of the swallow-tail coat, and the general characteristics of this garment—so airily designed and yet so dignified—differing from the preceding style in insignificant details alone, if the tails are cut shorter or more rounded, the revers wider or narrower, and showing plain or lined with silk. But, on the contrary, it would be a difficult matter for some strong-minded and unprejudiced tailor to succeed in introducing a dress coat that differed radically from the present styles, something in the shape of a Roman toga or even less familiar than this. Some-

thing entirely different from what has preceded it awakens disagreeable sensations that may grow into the most intense aversion and repugnance. Lombroso, the great Italian psychologist, has invented a very apt term for this aversion and repugnance, "misoneismus," hostility to what is new, and proves its existence in uncivilized man, in the child and even in animals. To return to my simile of the loom: if the threads vary in color, neither the machine nor the workman in charge are disturbed, as long as the design remains the same. A change in the color of what is being woven does not require any alterations in the loom, nor any more attention on the part of the workman. But if the pattern has to be changed, it entails the trouble and labor described above. This is the explanation of the fact that the masses are attracted by what is novel, and yet rebel against everything that is really novel, that is specifically different from all their accustomed ideas, with real fury and often with the energy of despair.

I am inclined to believe that savage races disappear before the approach of civilization simply because the enormous change in all their surroundings demands too many new ideas and individual efforts of their minds. By himself alone, without any assistance from his inherited processes of thought, the individual uncivilized man is to accept the new impressions, make them his own, assimilate them, combine them into ideas and trains of thought, and respond to them with individual conclusions and actions that are utterly foreign to his organism, and to which his brain and his nerves are not adapted. This is an achievement almost beyond the power of civilized man to conceive adequately. For it very rarely happens that even the most original civilized man, differing the most from his fellow beings, is forced to accept entirely new impressions, and create entirely new combinations of thoughts

and conclusions. But the barbarian is called upon to perform this most exalted achievement of the human organism suddenly and continuously, on the most extended scale. No wonder that it exhausts him completely and that he soon succumbs. If there were another civilization as immeasurably beyond ours as ours is beyond that of a Papuan of New Guinea, and it were to burst upon us without any preparation, the greatest philosophers and statesmen of the Caucasian races of the day would dwindle away and disappear before it just as savage tribes die out at the approach of our civilization.

My conclusions in regard to the relations between the genius and the Philistine are drawn from these observations, which are directly opposed to those of Carlyle. The Seer of Chelsea has his hero appear like a Captain Cook in the crowd of average men, and, calling attention to his stout guns and cannons, demand of them submission, recognition of his supremacy, and admiration of his superior artistic and scientific attainments. I do not consider the life of one of the select few to be at all like a voyage of discovery to the South Sea, and a landing among naked cannibals. I can not concede him the right to demand of the typical masses who inherited their ideas ready-made, the same original intellectual activity, independent of habits that have become organic, which are rendered easy to him, the untypical individual, by a greater supply of organic energy. When solitary greatness does not content his impulse to work upon others, if he is not satisfied to sit all his life as the single spectator in the theatre—like a well known eccentric royal personage—and listen alone to the play, which his thoughts are performing for his sole benefit, when he has that instinct inseparable from all powerful manifestations of vital energy or life-force, to ensure perpetuation to his form, and imprint it

upon other organisms, then he must wed to his originality a fair damsel whose name is Patience. He must gradually accustom the masses to his novel ideas as to a foreign tongue or an artistic form of gymnastics, that is, by example, systematic explanations, and frequent repetitions. In short, the question is whether the average man can be broken to a new yoke which he can wear with the same lack of thought and effort as the old, just as automatically, as drowsily, and chewing his cud in the same way as the old—and this precludes all sudden innovations.

The reader will perhaps notice that I only place new and old ideas in opposition to each other—not better and worse, higher and lower—in short, that I refrain from employing adjectives which might indicate praise or blame, or a prejudice in favor of some, and an aversion to others. The point at issue in the silent or blatant strife between the original minority and the typical majority is, in fact, nothing but the attempt to substitute new conceptions in the place of the old and inherited ones. These new conceptions need not necessarily be better ones, their essential characteristic is merely that they are new, that they are different from those received by inheritance. The masses are usually called stupid. This is doing them an injustice. Considered by themselves alone, they are not so stupid, they are only not so wise as the most talented individuals of the day. The masses merely represent that stage of development on which the talented few were standing yesterday. The talented few of today are farther advanced, it is true, but tomorrow the masses will be where the former are now, and to have the right to call them behind the times, and to look down upon them, the genius of tomorrow must surpass the genius of today as much as the latter surpasses the common herd. Originality and mediocrity have thus not a positive, but only a relative

significance. The exception strives to become the rule, the original specimen to become the type. Powerful individualities are valued as independently invented models which average men are to faithfully copy. The new style of hat designed by some audacious inventive genius yesterday, when it caused a sensation on the city boulevard, will parade tomorrow at the village church on the heads of all the peasant girls, and will no longer attract the attention of even the beribboned farmers' lads. What causes this difference in its effect? Is the shape altered in any way? No. It has only ceased to be rare. Commonness is worn-out originality. Originality is the first night, "première," as the French say, of commonness. We shrug our shoulders now when we find a sentimental poet comparing the eyes of his lady love to stars, and admire Lenau when he says in his boldly figurative language: "The lark climbs in triumph to the skies on her gay-colored songs." And yet, the former simile is a beautiful one, far more beautiful than the latter. The lover in comparing the eyes of his loved one to the stars, gives us first a comprehensive description of them, and then, in copying the picture of the eyes in question, makes use of a method of enlarging it which must flatter the vanity of the fair one thus complimented, and enables her to form a fine idea of the exalted inspiration of his genius. He also associates the person of his loved one with the most sublime phenomena of the universe, and exalts her beyond her petty individual finiteness into the infinity of nature itself. Lenau's simile can hardly bear comparison with this; it at best only summons up the image of a ladder in our minds, even if it be a ladder painted in bright colors, up which a lark is climbing like a trained tree-toad in his glass. It might indeed, be an interesting sight, but not an especially beautiful nor even an inspiring one. The

comparison of eyes to stars must certainly have produced a profound impression upon his contemporaries when some poetic genius of the darkest of all dark ages hit upon it for the first time. It has become commonplace. Why? Because it is magnificent. Lenau's striking simile will never meet with this fate. It is not profound enough for it. And this is what I have been aiming at: all that is commonplace and stereotyped today was not only the originality of yesterday, but the very flower of this originality, all that was best and most valuable in it, all of it that deserved preservation, not only because it was new, but because it was new, good, and true. Hats off to the Commonplace! It is the aggregate of whatever is most excellent in all that the human intellect has conceived up to the present day.

What we call public opinion, that is, the ideas that sway the masses, ought not to be the criterion for the best intellects of any given time. But it is worthy of interesting even the highest intellects, in so far as it is the fruit of the whole of the previous development of mankind. The confused tumult in a mass-meeting consists of the voices of great thinkers who speak from their graves, often a thousand years old, through the throat of some ward politician, hoarse from excessive beer-drinking, and any one who will take the trouble to resolve the noise into its constituent elements, can trace each party cry, that has long since lost its meaning, and each empty phrase, back to some grand original source. The commonplaces of the Philistine's speech began their career as something startling and brilliant, and every instinctive inclination and aversion, every prejudice, every involuntary act of the average man, was in the first place the result of the severe and earnest mental exertion of some exceptional being. The majority, in short, and in conclusion, signifies the past;

the minority can signify the future, if its originality is authentic. Aristotle, the father of our acquirements in most fields of knowledge, would not be able to pass a college examination anywhere today, except perhaps in Greek, and even in this, he might not be so well grounded as some of our modern philologists. Harvey's explanation of the circulation of the blood—to his contemporaries, an incredibly audacious and heretical contradiction of all recognized truths—is now taught in the public schools without causing any sensation, and the genius who now towers supreme above the masses, and prides himself upon having nothing in common with them, upon thinking and feeling differently from them, and not being understood by the crowd, would perhaps be astonished if he could return to the earth a thousand years hence, to hear the small boys repeating his most peculiar and startling ideas, with as much fluency and comprehension of the subject as if they were telling him the time of day.

What I am unable to understand under these circumstances is that the conservatives and reactionists, the defenders of existing institutions and opponents of all innovations, are always hostile to the principles of democracy. If they realized what was for their best interests, they would all be arch democrats, they would advise the Czar to introduce universal suffrage into Russia, they would have the Swiss Referendum instead of their present Parliament, and consider the decisions of a popular assembly of incomparably greater importance than those of a cabinet meeting. The masses are always conservative, because they act from inherited race-impulses and not from individual trains of thought; they are consequently only able to feel at home in the inherited conditions, and not in new ones. They may at times obey some powerful individual will that has dragged them out of the ruts of

custom, but no impulse of their own to roam at will, will ever induce them to forsake the beaten paths of preceding generations. Revolutions are always the work of a minority of individuals, whose originality can not endure the inherited conditions which were not calculated for them, and which are not adapted to them. The majority follows them, but reluctantly, and not until they have become gradually accustomed through several ages to consider the existent conditions as outgrown and unjustifiable. The only true innovators known to history are those enlightened despots of whom the conservative historian raves. On the other hand, those revolutions that proceeded from the masses, soon sank irrevocably into commonplaceness. We ought not to place the portrait of Frederick the Great, or Joseph II, at the commencement of a reactionary historical work, but that of some Democrat of '48, with the significant hat of his epoch, and if reactionists were intelligent and honest, they would acknowledge that barricades are one of the supports to the present structure of state and society.

However, when I employ the word commonplace in connection with politics, I use this term as a mark of respect. The object of politics is to procure for the masses the most favorable conditions of existence possible; it must therefore conform to the necessities of the masses. They think and feel automatically, that is, by established precedents, and in habits that have become organic; they therefore demand, and with justice, that they be not called upon to perform new and individual mental labor, which is almost always beyond their powers. By politics, then, we mean the rule of the majority, commonplaceness, inherited traditions. Any one not disposed to approve of these terms, as too unpartisan, can substitute for them, the tyranny of mediocrity and the good old way, if he likes.

The strong-willed individual of original development is not comfortable in the typical conditions which are precisely adapted to the typical masses. So much the worse for the strong-willed individual. He has no right to force the short legs of every-day people into his long pantaloons, on that account. Every institution that pleases the majority is a good one; not considered in itself, but under the given circumstances. This can not be otherwise. Let us assume that the masses are mistaken, that they are demanding what is nonsense and are passing the most foolish laws. Then for Heaven's sake, let us hasten to grant their nonsensical demands and carry the foolish laws into execution! The masses will soon find that they are worse off than they were before; some wiser and more far-sighted minds will reveal to them the causes of their distress, and they will soon demand the needed changes. If, however, contrary to all expectation, they find themselves pleased with their nonsense and comfortable under their foolish laws, then they are completely justified, when the wise-acre tries to convince them with all his might that they are unreasonable in feeling pleased and comfortable under these conditions, in escorting him out of the temple, according to ancient usage, with a shower of brick-bats, or, in the less elegant modern style, pointing him out to the police as a treasonable individual or a disturber of the public peace. If the masses are stupid, let them stay stupid! It is very fine and noble in the more intelligent individual to wish to undertake the arduous task of gradually educating them up to a higher grade of intelligence, but at first they can demand institutions and laws adapted better to the comprehension of blockheads than to that of shrewd and crafty legal quibblers and stock-speculators. I can only offer my sympathy to the minority of intelligent individuals who are compelled to live under the same laws and

institutions. Let us imagine a city inhabited altogether or almost exclusively by blind people. Theoretically we can conceive of such a thing. A person not blind would demand to have the streets lighted. His suggestion, in itself, would be most excellent. He could advance the most convincing arguments in favor of the necessity for street lamps, and portray with the most vivid eloquence the glories of the night illuminated by the electric light. And yet, the blind populace would reject his proposition by a unanimous vote, and I should like to see any rational being who would not acknowledge that they were right, and the advocate of the illuminating system wrong! Abdera, the home of Democritus, requires a city council consisting of Abderites alone, and there is no room in it for the guests of the Platonic symposia. If the latter are residing in the city, however, and do not wish to emigrate, there is nothing for them to do but to establish a club among themselves, where they can meet and ridicule their fellow-citizens to their hearts' content.

I think the Philistine can be satisfied with the place I have assigned to him in the world. I consider him a monumental figure, that is, the monument of the past—to be sure not always very perfectly preserved—with nose defaced, wretched attempts at restoration, and a coat of whitewash applied by some barbarian of a town whitewasher. His physiognomy is a chromo-lithograph of some picture of great merit as a work of art. He is the universal legatee of Genius, which bequeathes to him its most precious treasures. I see in imagination above the white night cap the green turban that proclaims him the descendant of the Prophet. Genius of course will not allow him to enter its inmost sanctuary. This is its exclusive, individual domain. The majority has no voice there. How the man of genius thinks and feels is his own



affair alone. But when he issues forth from his sanctuary, when he is no longer content with the effect produced by his example alone, when he is no longer satisfied to act for himself alone, he must lay aside the special robe of originality and assume the uniform of commonplaceness. Then he can be nothing more than an honored Philistine among the Philistines. In England, any prince or lord wishing to have any share in the administration of the municipal government, must first apply for admittance to some Guild. He must become, nominally, a tailor or draper or something of the kind. This is just exactly what I mean.

## A RETROSPECT.

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Once at a large evening party, I sat in the corner and observed the scene before me. The host was forcing his hard and unyielding features into that rigid smile or rather grin of a danseuse, which shows too plainly that it has been borrowed for the occasion from some dealer in masques and costumes. The hostess was curving her carmine painted lips in a sweetly amiable smile, while she was darting glances of triple distilled poisonous envy at some of her feminine guests who were younger and more beautiful than herself. The young ladies were playing the comedy rôle of startled and rustic country innocence, cleverly at times, and then so awkwardly that one was tempted to hiss them off the stage and pelt them with rotten apples—there were little mouths left open in the forgetfulness of pretty confusion, eyes raised toward Heaven in causeless ecstasy, there were perfectly imbecile “ah’s” and “oh’s,” bursts of idiotic giggling, like what oysters might indulge in if some mischievous finger were to tickle them, witty little repartees which made me want to raise my arms to Heaven, and utter a yell of despair, and through all this charming by-play and perpetual motion, the marvellous self-control of a warrior grown gray in service. Now and then a hard, implacable side-glance at some rival, a cruel or envious criticism of her appearance and toilette, with a scrupulous depreciation of its value, scientifically accurate observance of the length of her conversation with the dif-



ferent gentlemen and attention to the number of her partners and suitors, and between all this cold-blooded calculation, at brief intervals a mental falling on her knees at her own shrine, and repeating the constantly recurring litany of self-worship: "Thou art the loveliest, the wittiest, the most graceful of all, Amen!" The young and the would-be young gentlemen were worthy partners of this charming rose-garden of young ladies, as people are accustomed to say. They were admiring the whiteness and smoothness of their expanse of shirt front, the brilliancy of their pointed shoes on their large, flat feet, and the fit of their dress coats. They were almost able to imitate the chameleon as they looked love at some fair damsel with one eye and with the other cast still more infatuated glances at the mirror. { The empty space in their minds was filled with one single image: that of their own irresistible selves. / When one of them was conversing with any lady, he was watching with the most extreme tension of all his mental faculties, the effect which he was producing upon her, and which he was trying to increase as much as possible by a thousand absurd little arts of body, voice, glances and language. All this while the lady was occupied in the same way—trying to produce the profoundest impression possible upon him, and the collision of these two absolutely immeasurable vanities, these doubly merciless egotisms, produced in both the gentleman and the lady, a delightful self-satisfaction, visible to all,—such as the organism experiences when it is conscious of any grand and appropriate manifestation of energy. Besides these male and female fools so passionately in love with themselves, besides these insatiate scalp-hunters of both sexes—who only seek victims in a drawing room as in a primeval forest, to be able to suspend their trophies from their belts—there were other persons to interest the spectator. Shrewd and

practical suitors were laying siege to the mothers and aunts of wealthy heiresses. Some repulsive-looking block-heads were grouped around this and that silly and brazen-faced flirt, about whom all sorts of scandalous stories were whispered from ear to ear, and their sensual eyes, their satyr-like smile, revealed the secret thoughts that were exciting their morbid senses. Other people were crowding around a young man, the prime minister's influential private secretary, and did not consider it any disgrace to receive his unspeakable platitudes with smiles of approval and applause. A famous poet was being forced into a corner by a couple of officious ladies—who by every means sought to conceal their rings of annual growth, and made to serve as a pretext for the utterance of silly commonplaces upon certain works of poetry. A profound, philosophical thinker was so ill-advised as to stray into a small circle which had gathered around an artist inflated with self-conceit, and once there, was so good-natured as to take part in the conversation. The artist was talking of nothing but himself, his rivals, his paintings and his triumphs, and for a whole half hour gave the philosopher no chance for anything but the most non-committal and even imbecile remarks at which he must have blushed himself, afterwards. An actor was declaiming some anecdotes of the green room of rather questionable taste, with an emphasis and an energy as if he were standing on Mt. Sinai and proclaiming the salvation of the world, and flames of admiration were darting from the eyes of his fair listeners which almost burnt holes in the waistcoat of this theatrical High Priest. A man of many millions was looking at this brilliant, busy scene, and thinking to himself complacently how much more grandeur and sublimity he represented than these poets and philosophers, actors and artists, insignificant creatures to whom the fashion of the day or the

partiality of society, yielded a certain proportionate respect, but who yet, taken all together, were not worth a hundredth part of his signature. So this blending of idiotic arrogance, of silly love of dress, of limitations and lowness of mind, adamant self-conceit, and mere sleek stupidity, whirled on with dance and conversation, with the harmonious accompaniment of music and the clatter of plates and cups, until five or six hours had struck one after the other, and the guests had taken leave, with long-drawn features and black circles around their eyes.

Arrived at home I began to meditate upon the impressions received during the evening, as is my unfortunate habit. Why had I fatigued myself by the unwholesome vigil? Why had I deprived myself of the comforts of my bed to breathe air whose oxygen had already been consumed by common, stupid, bad or mediocre people, in the heat and the crowd? What benefit to body, mind or temper had I obtained from this torture? What agreeable impressions had I received? what witty or sensible remark had I heard? to what rational expressions of my sentiments had I been impelled? Glancing over the last few hours I saw nothing at all: a desert with a few dry camel bones, and some hyenas laughing in the distance,—a gloomy darkness with a weird *ignis-fatuus*:—a black chasm in my life. I began to be ashamed of my cowardice in having accepted the invitation because it would hardly have done to have snubbed the aristocratic and influential host by declining it. I felt humiliated when I remembered the immoral patience with which I had received the arrogant or merely imbecile remarks made to me, and even smiled politely at them, when I thought of the incomprehensible weakness with which I had stepped into other people's tubs and waded in the mire of their views and opinions—it actually seemed to me as if I were one of the parties to the crime with-

out any extenuating circumstances to plead in my favor. I had a regular *Katzenjammer*, all the more acute as I had not had the pleasures of the previous intoxication. And, as usually happens in such cases, I did not vent my ill-humor upon myself—who alone was really to blame for it all,—but upon the rest. It is so characteristic of human nature to make others responsible for the discomfort that we have inflicted upon ourselves. So I tried to enliven my embittered mood by passing a universal sentence of condemnation upon all mankind. All geese, or donkeys, or rascals! Ruminating animals, or blood-thirsty beasts, or mongrel dogs of that kind whose pups are always drowned or given away! Objects of disgust or of horror! And a rascal or a fool, he who without being driven to it by necessity, will train with these creatures, and voluntarily howl with the wolves and bellow with the oxen, and praise the flavor of carrion to the vulture and compliment the turkey-hen upon her intellect!

While these thoughts were chasing each other through my brain, my glance fell accidentally upon my microscope left upon the writing table after my afternoon's work. The sight of this instrument affected me as never before. The comparison may seem extraordinary but the microscope seemed to rise before me like the nude Phryne before the judges at Athens, and say: "Look at me, and then condemn me if you can!" I heard a voice in my heart that, with solemn emphasis, began to call me unjust, and to praise in exalted terms the human race which I had just been condemning. How had I dared to accuse those beings who had been able to invent the microscope, of stupidity and superficiality. What profound, persevering and intense mental effort even this one instrument represented! It might be that it had been chance alone which had revealed the action of a ray of light upon a convex or a con-

cave glass and then upon a combination of both. But the human intellect had taken advantage of this accident, and by its exertions had obtained from it all the fruits it was able to produce. The track of the rays of light through the different glasses had to be traced and accurately determined, as they first separate, then converge, and then unite. The geometrical laws for these phenomena had to be discovered. An apparatus of marvellous delicacy had to be constructed to engrave lines on a sheet of glass that would divide a millimeter into tenths. Men have accomplished all this. And why this expenditure of energy and thought? To move the boundary stone of knowledge very slightly forward—a distance almost too infinitesimal to be measured. For none but the entirely ignorant can overestimate the services which the microscope has been able to render to humanity. What we can distinguish through the microscope is not only in size but also in importance, of infinitely less value than what we can see with the naked eye. The dog is far more wonderful than the infusoria and the oak-tree than the bacterium. A vein is far more wonderful than a hair bulb, the combined movement of an arm far more surprising than the crawling motion of a lump of protoplasm or the Brown's sparkle on some inorganic atom of matter, and a human chest with everything contained in it, far more amazing than a cell and its contents. The conclusions in regard to the relations existing between the universe and our Ego, which a single glance at the world around us enables us to form, are beyond all comparison with those drawn from the most persevering study of microscopical preparations. Of that which we are really anxious to know—how bodies are constituted in their inmost structure, of what final, simplest elements they are composed, and the operation of the chemical and vital forces—the microscope does not reveal a syllable. The

last form of all, disclosed to us by the most perfect of these instruments, is the cell, in which we distinguish a kernel. Possibly our sight may reach so far as to discern that this kernel consists of an integument, probably containing some fluid, with a central nut or atom. Here our seeing and distinguishing ceases. Judging from its actions, the cell-kernel must be an extremely complicated piece of mechanism, whose construction and operation we ought to first understand before we can solve the mystery of life. But such an enormous interval still extends between the cell-kernel and its ultimate constituent elements, that the short distance we have traversed by the aid of the microscope—from the tissue visible to the naked eye, to the cell—is not to be mentioned in comparison with it. It is as if I were sitting in a room in Berlin and wanting to look over at New York, had opened my door so that my range of vision had been enlarged by the whole width of the anteroom. And for this insignificant increase of their range of vision, men have taken all these infinite pains, have toiled so perseveringly, and expended so much intelligence and skill!

Turning from my microscope to the book-case, my glance fell upon the works of Thompson and Helmholtz. I began to meditate upon what we know at present of what are so generally called the secrets of nature. "Nature has no secrets. She does everything with good-natured openness. Her work is done in the bright daylight, developing light and noise, and is accompanied with special phenomena that attract attention to it. It is our fault, or rather our weakness, that we are not able to comprehend what is going on around and inside us. As parents converse unconcernedly on all possible subjects in the presence of very young children, while the as yet undeveloped brain of the small and unheeded auditors is not capable of grasping the

substance of what is said, and can only seize a few single and isolated words, nature proceeds with all her tasks in our presence, and we look on with the uncomprehending eyes of children, and fail to understand, only noticing here and there some touch, some frequently repeated movement, some single word, without even faintly surmising what it all means, and what it is done for. The reader sees that I do not overestimate the amount of our knowledge of nature's processes. But even the little that we have learned by gazing at the grand Mother—what glorious faculties it presupposes in us human beings! We have had to spend hundreds, thousands of years, strain to the utmost our keenness of perception, our memory, our faculty of combining single facts into a whole, exert our powers of imagination to the farthest limit, cultivate patience and observation, we have had to avoid the most deceptive and tempting false paths, and conquer the most obstinate habits of thought, before we could attain to our present standpoint in our knowledge of nature. It is a favorite fancy of mine to imagine Pythagoras visiting the scientific department of some one of the great universities of the day, as a famous foreign scientist, escorted by the professors in charge. I picture to myself the trains of thought passing through his mind, and the alternations of amazement, reflection and admiration expressed by his countenance when the apparatus are shown and explained to him, which analyze the rays of the sun and even of the nebulae to the chemical nature of their sources, which register the number of sound-waves in a second, and determine the number and extent of the vibrations of a ray of light, the rapidity with which the electric current passes through a copper or silver wire, and measure the amount of heat, which becomes free or is retained in the chemical combination or separation of two gases. What a vast horizon

would suddenly open before him! What an almost divine enlargement of his intellect he would feel in himself! And yet this grand old Greek knew so much in his day, and had already conceived the idea of seeking to trace the action of immutable, simple mathematical laws in the phenomena of nature! What vast intelligence was required merely to surmise that the air we breathe is composed of several elements, that water, so simple, so omnipresent, and therefore so familiar to us all, and certainly for thousands of years not noticed as anything remarkable, consists of a combination of two gases, that a sound is in reality a succession of waves, a single color several thousands or millions of vibrations! In fact, as I analyze my sentiments, I find that these wonderful facts in natural history do not inspire me with such amazement as the impulse within us which has impelled us to search for them. Those men who devoted years of study and investigation to the uninteresting subject of water, who, proceeding from their observation that heat transformed it into a substance like air, propounded the query whether steam itself was not composed of more elementary steams or gases—those men were not obtuse nor inattentive. They were not satisfied with any superficial appearance. They wanted to see down to the foundation of everything. Or those men who devoted their time to something so common as an impression on the sense of sight or hearing, and learned to recognize this impression, apparently so simple and indivisible, as a combination of several elementary constituent parts, were they careless *bons vivants*, enjoying life from day to day? No, those men were moral. They were profound and grand. They did not seek the gratification of their coarser and coarsest senses; they sought delights for the noblest instincts we possess—the longing for truth and knowledge. There is certainly a pleasure in the discovery of a new

truth, and probably a far more intense one, than any merely physical gratification can possibly afford. Archimedes' cry of "Eureka!" rings clearer through the history of humanity than the rapturous cry of any lover at his loved one's first embrace, and Newton's speechless horror, when his dog, by upsetting his lamp, set fire to the manuscript containing his most important calculations, was probably a pang as full of anguish as those experienced by Napoleon, the evening of Waterloo. Most assuredly it is a pleasure very different from the one produced by a good supper, or even a succession of good suppers extending to one's life's end, or by parading in elegant clothes, or the flattering remarks of one's neighbors at table, so-called conquests, and success in society, and assuredly there are men, to whom we feel like kneeling, those men who demand nothing better of life than the hope of discovering some new truth, whose highest happiness and delight is some new attainment in knowledge.

Beyond the natural philosophers, the astronomers, and the naturalists, the philosophers rose before my slowly moving eye. Fechner, Lange, Wundt, Zeller, Lazarus, Spencer, Bain, Mill, Ribot, I read in succession on the backs of those books especially dear to me. Like a scene from Macbeth, helmeted heads and crowned figures appeared before me,—a long procession of kings emerged from obscurity, and filed imposingly past me, a greeting in the slight inclination of each mighty head, kindness in their friendly eyes. And differently from Macbeth with the witches, I did not feel horrified at this sight, but experienced an indescribable sense of exaltation. For these kings, these conquerors of broad intellectual domains, these victorious commanders in chief in the warfare against powerful errors, were not enemies, but my own distinguished ancestors, to be related to whom—however dis-

tant the relationship—and to be descended from whom—in however remote a degree—is a source of incomparable pride and exultation. And this descent, this relationship, can not be denied. All of us who have any share in the civilization of the age belong to the family of these intellectual sovereigns, although perhaps only as younger sons, without any expectation of ever succeeding to the more exalted positions. We all bear a family resemblance to the illustrious heads on coins and medals. We can prove the possession of family jewels—ideas and conceptions—which we have inherited from these ancestors. They toiled for us like giants, and we are now living amid certain possessions in the way of knowledge, whose acquisition was a far more wonderful task than all the twelve labors of Hercules combined.

I repeated what has been done so often before me, that it has almost become commonplace: inspired by the sight of Lubbock's *History of Man*, I passed in review in my mind the whole development of our race from its first appearance upon the earth to the present day. What an ascent! What a succession of glorious and elevating scenes! Those human beings whose kitchen refuse is found in the moors of Denmark, and those whose skulls are discovered in the valley of the Neander, at Cro-Magnon and at Solutré, did not stand much higher than the more gifted animals—perhaps not so high as the trained poodle, which Sir John Lubbock is now teaching to read; certainly below the Terra del Fuegians, the Bushmen, or any other living type of human beings. They were not so well protected against the cold and the wet as the naked angle worm, which can at least bore its way quickly and easily into the ground. They were weaker than the great beasts of prey, slower than the hooved quadrupeds, and more defenceless than the horned animals. Where they could not



find fruits on the trees, they lingered on the sea-coast, and waited until the receding tide left them all kinds of shell-fish on the beach for their food. But in these wretched creatures there lived a certain something that made them the pride of the earth. They were the only ones in the long series of living beings known to us who did not calmly accept their fate, but took up arms against the conditions of existence imposed upon them by nature. They were naked? They procured coverings for themselves from the mythical fig leaf to the silk and satin robes of the fashionable costumers of the metropolis, which are described as works of art by even serious people. The rain annoyed them? They built a shelter for themselves from the nest of interwoven branches in the tree to the dome of Michael Angelo's St. Peter's, and found time in between whiles for such jokes as the umbrella, the Panama hat and its caricature, the undress cap. They did not run fast enough? They first broke the horse to harness and finally attained to the Lightning Express, amusing their minds on the way by inventing the cab, the bicycle, and the horse car. Were they weaker than the large animals? Krupp and Whitehead live to prove that they need no longer fear any enemy. Never standing still a moment, constantly pressing forward, they kept advancing farther and farther, higher and higher, from weaving strips of bark to the steam power loom, and from the stone hatchet to the electric accumulator. Each generation has toiled in turn at this task, each one without exception. We read and hear sometimes that the human race has forgotten all sorts of important inventions; that certain arts and natural forces were known to the ancient Egyptians, Indians and Jews, which are either entirely lost to us, or which we have been obliged to discover anew after centuries of disuse. This is improbable in the highest degree. Such a supposition is

the production of that same mysticism which has beguiled mankind into the wide-spread delusion of the "good old times," and the "Golden Age" in the past. It is not true that there are periods of retrogression, or even stationary periods, in the history of mankind. The assertion contradictory to this is based upon inaccurate observation and partiality. In Yucatan, the ruins of grand temples revealing a highly cultivated knowledge of architecture are found in the primeval forests, while the present inhabitants of the country dwell in cabins made of branches. In Central Asia the nomadic tribes, whose only shelters are tents of rugs, wander through the ruins of extensive cities, with stone palaces, irrigating canals, statuary and inscriptions. In Egypt the pyramids and the gate towers look down upon the mud cabins of the Fellahin. It seems as if the first half of the Middle Ages had been nothing but the decline of the ancient Græco-Roman civilization. I do not at all forget to take this into account. But what is it we notice in each one of the cases cited above? Merely this, that mankind, for a while had forgotten those cravings for luxuries and how to satisfy them. The Beautiful, the Superfluous could be forgotten, but the Necessary, the Useful, never. Men might lose their skill in embroidering their clothes, but never that of clothing themselves, after they had once acquired it. They might cease to shingle their roofs with plates of gold, but they would never cease having a shelter. The essential facts of knowledge, that is, those destined to assist man's inherent helplessness in the midst of a hostile nature, that is, those which render the preservation of self less difficult, these facts he has never forgotten. It has happened that barbarous tribes have invaded and destroyed states which had become enervated and corrupt by a high state of civilization. Then comes the cry of retrogression and return to



barbarism. All wrong. The triumphant barbarians were never stationary in these cases. They continued developing by their own energy, or by learning from the conquered peoples. And that these latter did retrograde, was not because their impulse to progress had become stationary, but because they were forcibly prevented from continuing to live in their old habits by their new masters. I will believe in the possibility of a retrogression of mankind, if a single case in the history of the world, even one single instance, can be pointed out to me where a people—not forced into it by some external, irresistible compulsion, but still living in the same surroundings and circumstances as of old—has ever declined from a state of civilization once attained to a lower state, rapidly or even gradually. I have sought in vain for such an instance.

Material progress I know does not inspire any respect in the minds of confirmed scorners of the human race. What does it prove, they say, that we now communicate by means of the telephone and telegraph, or that we shoot with repeating firearms and no longer with arrows? Inventions, however beautiful and useful they may be, do not owe their origin to the goodness nor even to the special intelligence of man. They can be usually traced to some accidental origin, and the perfecting of them is almost always due to the operation of the basest impulses. The man who first constructed the steam engine did not think of lightening the toil of wretched burden-bearers and wheel-drivers, but only of enriching himself and winning fame. No inventor was ever content with the knowledge that he had rendered a service to mankind. He always sets eagerly to work to procure patents which impose often quite a heavy tax on the beloved human race before it can enjoy the new convenience. He yells as if his teeth were being pulled when he thinks he is inadequately honored,

appreciated, or insufficiently paid. So railroads and labor-saving machines are by no means arguments to refute the meanness of men.

I will not stop to reply to these assertions in detail; I will only say, how grand has been the intellectual and moral as well as the material progress of mankind! What an aggregate of nobility of character, fidelity to convictions, and sublimity of purpose is the history of our race! To be sure, if we choose, we need see nothing in it but a series of devastating wars, brutal pillage, intrigues, lies, unjust actions and deeds of violence. But it is not the fault of the human race in general that the writers of history have preferred to depict the hideous and criminal side of events. There is a beautiful side as well; we have only to seek for it. In the most revolting carnage of a battle, there are always glorious traits of unselfishness, self-sacrifice, and benevolence displayed. Even in the slaughter of the innocents at Bethlehem there were probably some mothers who found in it an opportunity to lavish all the treasures of a maternal heart, loving with the utter forgetfulness of self, and I do not doubt that even on the eve of St. Bartholomew there were not lacking deeds of touching loyalty and glorious heroism. The names of those who fought and bled for what they recognized as truth shine forth from every page of the history of the world. Blood was shed, noble, generous blood, often in streams, at every acquisition, at every onward stride of the world's progress. And those who offered it, so magnanimously, what reward did they expect? Evidently no material reward, for how could all the millions in the Bank of England benefit me, if the communication between my mouth and my stomach had been interrupted by my throat's having been cut in two. And not even a moral reward, not even fame, that continued life in the memory of mankind,

for many deeds of heroism occur in obscurity, unobserved by loquacious witnesses, seen only by the hero's inward eye which closed for ever when the sacrifice was completed. The advance guard of the army of thought never fought for their own material advantage, but for the possession of a treasure so fine and noble that it requires a superior mind to even appreciate it—for the right to breathe in an atmosphere of truth, to bring their actions into harmony with their views, to utter aloud the lightest whisper in their inmost soul, and allow all men to share in the knowledge of some beneficent discovery.

I need not refer to the martyrs, as a tragic instance. The beauty of humanity was not revealed amid the flames at the stake, and on the stage of the bloody scaffold alone, it manifests itself more modestly, but just as visibly, at all times, at all places, and among us now. Our every-day life is interwoven and penetrated with it. Our civilization bears its features in the smallest as well as in the largest details. For example, let us imagine the sentiments which have preceded the decision to found a hospital, where poor people will be taken care of during their illness! Or a loaning establishment, where money is loaned to those in need at a low rate of interest! Those who invented these institutions were rich, as a rule, living and dying in luxury, without any personal experience of cruel necessity and misery. We could not have reproached them if their minds had been occupied with the familiar scenes of a luxurious existence alone, if there had been no room in them for scenes of poverty which they had never seen. But they came out of themselves. They went forth in quest of what was outside their own experience. They took the trouble to imagine the sufferings of others. Sitting as rich men at their table, they inquired of each other what the sentiments of Lazarus, outside the gate,

might be, and playing with gold pieces, they imagined how it would seem not to have pennies to buy bread for their little ones. Is this not fine, is it not unselfish? Perhaps the thought of possible contingencies may have had some share in it. The first person who cared for the sick and the poor may have been unconsciously influenced by the idea: "I might some day be poor and sick myself, and then the hospital or the lending house would be a benefit to me as well." But surely no one has ever thought, at least in Europe where the doctrine of the transmigration of souls is but little believed,—that he would ever be a dog or a horse, and yet societies to protect and care for homeless dogs have been founded, and the royal mantle of human charity thrown over the unreasoning animal. I respect this benevolence which even includes the sufferings of animals in its sphere of action, even when it appears in the anti-vivisection movement. Those people who originated it are, to be sure, hopeless imbeciles, as regards their intellects, proclaiming by it such an utter lack of comprehension and reason that they ought to be unconditionally deprived of the right of discussing the affairs of the state and the community, and even of managing their own property. But, as regards their sentiments, nothing can be insinuated against them. They have a heart for the sufferings which they see or can imagine. They act from unselfish, although idiotic sympathy.

Thus we are surrounded on all sides by sublime and affecting manifestations of the virtues of humanity. Thus all things proclaim man's grand and noble qualities to us: every invention, his ingenious mind and his skillfulness; every science, his faculty of patient observation and his earnest longing for truth; every event in ethical history, his unselfish goodness of heart and his charitable concern for his fellow-beings. The number of the mighty intellects

and noble hearts that have lived before us, or are living with us is beyond all computation, and the entire substance of our existence, of all our thoughts and of all our sentiments, as well as all our conveniences in daily life, consists of the fruits of their labors.

The devil's agent never loses his rights. He checked the exalted flight of my enthusiasm upon the subject of humanity by remarking with a grin: Quite correct. There have always been great men, and perhaps there always will be. But are they not the rare exceptions? Is the average majority any less despicable and common on this account? Are not the former always persecuted and tormented by the latter? John Huss, Arnold von Brescia were each of this kind; the crowds that stood around their stakes and saw them roast for their edification, were numbered by thousands. Galileo was one of them; the cardinals who forced him to retract by threats of torture, were numbered by dozens. The progress of humanity seems to you like an uninterrupted forward march, with a broad line of front, and heavy battalions. This is *one* view of it. I have a different one: I see it like a long line of animal-tamers who want to instil gentle manners into a cowardly and blood-thirsty beast. The horrid creature thinks of nothing but destroying its masters, and it is only withheld from doing this by the whip and the pistol, and its own stupidity and baseness. It is of course superfluous to add that the beast is mankind and the tamers, the great minds of all ages.

This speech from my inward voice awoke again for a moment all the sensations of disgust which I had brought home from the party I had attended. I was on the point of acknowledging that the devil's agent was right. But there was the microscope, the illustrious names were still shining on the backs of the books!—No, he was not right.

It is an oratorical device to separate mankind into a vast flock and a few shepherds. It is false, this trying to represent the select few as the only impelling force, the masses as the perpetual hindrance. I shared in this error, myself, for a long while, I must confess. I believed that all Caucasian humanity might be thrown back to the standpoint of the Middle Ages or even farther back still, by decapitating ten thousand selected contemporaries, the only real upholders of our civilization. I do not believe this any longer. The sublime attributes of humanity are not the exclusive possession of a few, who are the exceptions. They are the fundamental attributes which are evenly distributed throughout the entire mass of the race, like the organs and tissues, like the blood, the cerebral matter and the bones. Of course a few have more than others, but all have some. It is a pity that the experiment can not be tried in reality! but, theoretically, I can imagine a number of the most ordinary, average men, without any special intellectual training, without any professional knowledge of anything, men with no more comprehension of any subject than is obtained from superficially glancing over the articles in the newspapers, and listening to the conversation in saloons; I can imagine a number of these men shipwrecked on a desert island and thrown altogether upon their own resources,—what would be the fate of these Crusoes? At first they would be worse off than the savages of the South Sea Islands, never having learned how to make use of their natural talents. They would not know that it is possible to eat without being served by a waiter, or that food is to be found outside of the markets, or that the needed hardware can be procured in other ways than by repairing to the store. But this state of affairs would not last long. They would soon learn how to help themselves. They would first make discoveries in themselves, and then pro-

ceed to important inventions. It would soon become apparent that a great mechanical talent was latent in some one of them, a talent for philosophy in another, for organization in a third. In the evolution of their experience they would repeat the whole history of the development of mankind, in the course of one or two generations. They would all of them have seen a steam engine, but none would know exactly how it was constructed, and yet by the study and reflection of each, they would soon find it out and make one for themselves. They would all of them have heard gunpowder described, and yet none would know exactly the proportions in which the ingredients are combined; and yet, notwithstanding this, they would soon produce serviceable gunpowder. And in the same way with all appliances, arts and sciences. Those men who at home would have been considered the most ordinary set of individuals, would prove in reality to be all Newtons, Watts', Helmholtzes, Graham Bells, etc. The opportunity for developing, which the desert island afforded them, had never arrived in the midst of our civilization. Civilized life required nothing more of them than gossip and stupidity, and more or less cash. With the latter they bought whatever they wanted and could not obtain on credit, and gossip and stupidity they supplied abundantly at all times. Necessity required earnestness, profound reflection and inventions of them, and behold! they supplied them whenever needed, and in a sufficient quantity to have made them men of mark in any large city of Europe. It has long been a familiar saying that we become best acquainted with men in camp-life or on a journey. Why? Because there they do not slide along in the accustomed grooves, because they have to manifest all the intelligence they have in their inmost being to meet the emergencies that arise, and because, as a rule, this compulsion forces them to reveal

qualities whose existence in them no one would ever have suspected. I am almost ready to believe that every normally developed man has in him the talent for a great promoter of civilization. He has only to be compelled to become one. Just as the top branches of a tree can be turned into roots, if the tree is planted up side down in the ground, and the leaf-grown branches compelled to imbibe their nourishment from the soil.

My soirée now presented itself to me in a very different light. I no longer saw silly girls and fops, egotists and blockheads, commonness and vanity, but only unrecognized talents. Brutuses feigning idiocy, great men who would be able to restore the whole of our civilization, present and to come if it should happen to be destroyed by any possible cause. A profound love and admiration for all humanity filled my heart and lasted, until I—next came in contact with my fellow-men.

## SUCCESS.

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What is the ultimate aim of education, of all teaching and of all training? Evidently to make life more agreeable by deepening, enriching and beautifying it. There can be but one opinion on this point. Those instructors of youth who apparently interpret the purpose of education otherwise, simply do not go so far as its extremest aim, but stop on the way. Thus when it is said that education is for the purpose of forming the character. What does this sentence mean if we analyze it? The character is formed—not for the sake of its own beauty, nor to delight the eyes of a few connoisseurs, as a bronze statuette is cast and chased, but with a view to applying it to some practical advantage. A fine character—that is, decision in resolution, perseverance in performance, inflexibility in the convictions, loyalty in the affections, and fearlessness in the inevitable conflicts—is considered a good weapon of offence and defence in the struggle for existence. It is assumed that it greatly facilitates the victory over one's rivals and adversaries, or—if the gods choose to allow an unrighteous cause to triumph and the righteous cause has to console itself for defeat with Cato's approbation—that it will afford to the conquered party the satisfaction of feeling rewarded by and proud of those very qualities which led to his defeat. Or if it is claimed that the aim of education is to cultivate the intellect, strengthen the will, and develope a taste for the good and the beautiful.... What

is the use of all this? The intellect is cultivated to enable it to comprehend the phenomena of nature and society, to have the satisfaction of understanding the nature and the cause of many things—at least up to a certain point, and to learn to avoid dangers and profit by advantages. The will is strengthened to enable it to keep everything harmful away from the individual. The taste for the good and the beautiful is developed to enable it to produce pleasing impressions upon the consciousness. What is the object to be accomplished by all this? Simply to make existence more agreeable to the individual.

Now then, does the school in the way in which it is conducted at present and with its present systems of study, does it accomplish this purpose? I deny it. Almost all men are striving towards one single end—external success in the world. Without this success it is impossible for life to contain any pleasures for them. When any one promises to make existence more agreeable for them, they understand by this merely that success is to be made easier and more certain for them. If this preconception is not realized, they feel that they have been cheated and deceived. This is the point of view of 999 men out of a thousand. And perhaps in reality the number of those who require anything more from life than external success, is even less than I have assumed. The school, however, trains for anything else rather than success—that single source of happiness and satisfaction to an overwhelmingly large majority.

The ideals of a modern education are entirely separate from those of life—they are even directly opposed to them. The whole of the present system of teaching and training seems to have been invented for the sole purpose of educating men who soon come to despise mankind and the world in the whirl of real life, and withdraw full of dis-



gust, from the struggle for the prizes in political and social life, to seek seclusion in a calm and chaste contemplation of self, and absorption in sublime visions; in short, those who, without resistance to the vulgar, are expected to peaceably resign their place at the feast of life. This is the secret of the whole matter. It seems as if schools and colleges had been devised by some shrewd individuals who wanted to secure the best morsels for themselves and theirs, and spoil in advance the appetite of those sound, lively stomachs whose future hunger might be dangerous to them. It seems as if the teachers saw rivals growing up around them in their pupils, and tried to make them harmless from the start, by cutting their nails, filing their teeth, and tying blue goggles in front of their sharply observing eyes. The school prepares us for the struggle for existence in exactly the same way as if a book of military tactics should prepare the soldier for war, by instructing him that he has weapons merely to leave them at home; that he must be careful to refrain from answering the enemy's shooting with any firing in return; that he must relinquish to the enemy all the good positions he may have at his command, and that, more than all else, it is far more glorious to be defeated than to be victorious. Many people would consider such a manual of tactics nothing but nonsense; but the enemy indeed, would be very much pleased with it.

The success to which I refer here, can also be differently described in a few words. It signifies to gain the respect of the majority. This aim, it is true, can be reached in many ways. We gain the respect of the majority if we have great wealth, or act as if we had; if we can present our name like a jewel in a precious setting of titles; if we can make our breast shine with the bright colors of ribbons and crosses; if we have power and influ-

ence; if we are able to force the town or the country to the conviction that we are great, or wise, or learned, or honorable to an exceptional degree. The practical advantages gained in return by the one respected are also of many kinds. They are material or moral, or both at the same time, generally with a preponderance of one or the other element. The masses have the good habit of manifesting their appreciation in the form of ready money. The popular physician has many patients and receives magnificent fees. The popular author sells his books in many editions. If a man is successful, he will thus earn large sums of money, and be able to obtain for himself all the pleasures that are to be had for lucre in this vale of tears. One of these successful men will devote himself to pheasants and truffles, another to champagne and Johannisberger, a third to ballet-dancers, and some odd fellow perhaps, even to the relief of the deserving poor. It is not necessary for us to follow the devious pathways of individual preferences. The moral advantages of success are of another kind, and although nothing can be bought with them, as the popular saying goes, yet they have a high value for most people notwithstanding. And what a strange contradiction is human nature! The grocer will not give a single box of ground pepper for these moral advantages, not even when it is adulterated with olive stones, but he will make the greatest sacrifices of time, patience, eager exertions, and even of money, his dear, blessed money, for them. They are: deferential salutations on the street, having the newspapers mention us from time to time, and, in marked instances, accompanied by flattering adjectives. In the various classes of society and professions they assume different forms. Royal notice at a court ball; the display of one's photograph in the shop windows; obligatory calls from traveling foreigners; being importuned for loans by offi-



cious unknowns; a diploma of honorary citizenship; the deference of the waiters in the principal eating and drinking rooms; requests to contribute to the monument to famous soap manufacturers; flattering invitations to dinner and tea in elegant houses,—these are a few examples of the fervently longed for gratifications—not of a material nature,—that the capital, success, produces as interest. My classing the invitations among the non-material advantages of the respect paid is not a mistake but intentional. For what is essential in them is not the proffered viands, but the honor shown in the invitation. The food is only meant as a symbol, and besides, its full value, at a liberal estimation, has to be returned in presents at Christmas time. The honor, on the contrary, is all pure gain, and is held in less esteem than the bill of fare by none but low-minded natures.

Let us see now whether the school prepares youth for the strife for success and supplies it with even the elementary principles of the art of winning the material and ideal gratifications enumerated above. There is not much to be said against the common schools, I confess at once. At the age at which the children attend them nothing serious can be begun with them, for the accomplishments with which we make our way in the world, presuppose a certain development of the intellect, and some maturity. The common schools teach the children how to read, write and cipher, and these can only be useful, especially the latter. To be able to cipher is a great advantage in giving, and also an advantage, although less so, in receiving, and reading and writing are also beneficial if one is wise enough to use them within due bounds. The universities can also be partially approved of, for the clubs and secret societies afford opportunities for the development or evolution of some important talents,—for instance, the talent of

attracting the attention of one's equals and superiors by loud speechifying and versatility, or that of discerning the prevailing currents and allowing one's self to float along with them, or of paying court to influential people; and attentive observation of the relations existing between the professors, the assistant professors and the tutors will also lead a talented young man to certain conclusions that may be of great value to him all his life. But unfortunately the high schools do not lay the greatest stress on students' societies, and they do not restrict themselves to exercise an educational influence by the inspiring examples of academical careers—or at least of some academical careers. They inflict upon the young all sorts of lectures and exercises, with recitation-rooms and laboratories, and all these seem to me of very questionable practical value for the student's success in life. The gymnasium or classical course, finally, is not worth a pinch of powder. It does not further in any way the future citizen entrusted to it. On the contrary it makes him still more awkward in the struggle for success. It means a sad waste of the most valuable years of life. I ask what possible advantage it can be to a lad to be fed on Horace and Homer? Will it enable him afterwards to comprehend machine-made poetry more easily? Or what advantage will the enthusiasm bring to him which he may have experienced in reading Iphigenia? Will it enable him to converse wittily of the "Beggars Student"? As the last moral of history the sentence "*Pro patria mori*" is impressed upon him. Is this imposing sentence any guide how to address the Lord Chancellor with all due deference? To sum it all up, even with the best of talents, the lad will learn nothing that he can apply to any practical use hereafter, and he will not be able to apply to any practical use anything that he will learn.

There is a sad gap in our present system of education which really ought not to remain unfilled any longer. I dream of a school which would unhesitatingly assert that it educated its pupils for success, and would not falsely claim to serve any cast aside ideals. There are certainly men nowadays, who attain to success without any such institutions. But this does not prove anything against the correctness of my idea. In the dark ages of barbarism, even in countries without any schools at all, there were some isolated and exceptional sages who acquired their knowledge without any guidance or extraneous assistance, entirely by their own industry. But how laborious are these solitary studies! How much time is lost in them without need or profit! To what errors one is liable! How far from perfect and how one-sided, even in the most favorable cases, are the results! A teacher, on the contrary, removes the obstacles from one's path; the traditions of acquired knowledge prevent aberrations and idle fancies. Those men who have worked their own way autodidactically to success, when they turn around at the goal and look over the way they have come, must acknowledge with regret how many deviations from the path, how many steep climbs and how many weary, sandy and marshy places, a skillful guide or a little knowledge of the country would have saved them.

One thing I must state first of all—My school of success would not have any classes for girls. Woman is in the fortunate situation of not requiring any instruction in this science. She is provided by nature with all the knowledge she requires to attain to success in life, and the petty arts, not already born in her, she acquires afterwards without any assistance. In the present arrangement of the world, by far the largest number of women are striving for but one form of success—they want to please the

men. To attain this aim they need only to be pretty or to attract attention in some way. The lamentable idea has occurred to certain perverted minds to found young ladies' seminaries. In them the poor creatures are taught to draw, to pound on the piano, to speak foreign languages with an absurd accent, and confound the dates in history—thus, the very things that will later make them objects of horror to the men. The idea of these schools can only have originated in the brain of some soured old maids, or vengeance-seeking, henpecked husbands, whose wives were in the habit of beating them. It shows an utter miscomprehension of the feminine aims in life. The orientals, in their inherited, primeval wisdom, look at the matter from an incomparably more rational point of view. Among them the girls learn nothing else but dancing, singing, to play the lute, to tell stories, to dye their nails with henna, and the edges of their eyelids with khol—that is, the accomplishments which make them pleasing to man, which give them opportunities of displaying their charms in the most favorable light, which will fascinate and permanently attach their masculine companions to them for life. Our poor girls of the occident, by the prevailing system of training, are artificially prevented from following their own impulses, which would further their interests far more than all the spectacled and unspectacled professors in their institutions of learning combined. Not until they have left the foolish torture of the school behind them for good, are they free to follow their inward impulses and develope according to nature for the end in view. Then they evolve from themselves the art of painting their cheeks, of putting on powder, of wearing striking toilettes, of walking, standing and sitting in such a way that what is offensive in the contour of their dresses is most especially prominent; then, they learn all by themselves, how to

carry on an expressive by-play with their fans, how to allow their eyes to cast flattering glances, how to put on little airs, lovely gestures, delicious little pouts, and to make the charming modulations of the voice express child-like innocence, maidenly roguishness or piquant ignorance. With these means at their command, they are sure wherever they go to gather a host of admirers around them, to get dancing-partners, adorers, a husband and all the rest, in short, to obtain everything that makes life charming and agreeable. The elderly ladies will turn up their noses at them it is true, and they will make rather a repellent than an attractive impression upon the better and nobler men, who will think that grease, patches of paint, flour and daubs of all kinds are as much out of place on a feminine face as on a velvet dress, and that expanses of shoulders and enormous bustles make a woman look humpbacked and consumptive, or like a Hottentot, and that the craving for admiration and love of dress distort even the prettiest creature in the world into something positively repulsive. But what has woman to care for these criticisms? She does not expect any kindly regard from her own sex, and would not know what to do with it; and as to the masculine critic, it is a matter of extreme indifference to her if some learned crank does turn his back on her in disapproval, if only the young gentlemen from the Jockey Club gaze after her through their eyeglasses. It is impossible for her to conform her appearance and conduct to the criterion of a man of taste. The man of taste is a phoenix. Many women live and die without ever having met one. Only in the fairy tale does it happen that the Prince comes and finds the Sleeping Beauty and releases her. In real life it is best not to count upon this mythical person, and if any maiden is hidden behind the growth of briars, she has every chance of staying and being forgotten there.

Woman thus reveals great shrewdness when she seeks to please the crowd and not the undiscoverable phoenix.

But if woman as a general thing can dispense with a theoretical training for success, man is not so fortunate as a rule. He has to please individuals of his own sex in order to make his way in the world, and this is not so simple a matter as to make a favorable impression upon those of the opposite sex. It is true that there are some careers in which man enjoys the same advantages as woman, where he can operate with his personality and has only the ladies to please; for instance, as an actor, a tenor or clerk in some dry goods establishment. Men of this class do not need any school to teach them how to succeed. If nature has treated them at all like a real mother, they go ahead without any theories, as if propelled by steam. The finest instruction, unfortunately, can not give a charming, waving monstache, and even if one is able to impart a special charm to one's hair by artificial arrangement, the hair-dresser has to have a sufficient abundance of hair at his disposal or he cannot successfully perform his sacred rites. An Apollo Belvedere in flesh and blood, or even one of those warriors without a scar stationed on the Palace bridge at Berlin, need not have any anxiety in regard to their getting on in the world. As a private soldier, he will soon be promoted from the kitchen to the sitting-room of the family; as a footman or coachman, he will be always in active demand; as a waiter, he will make the fortune of his hotel and his own into the bargain; as a "supe" or one of the chorus, he can have his choice among the daughters of the land, and even to some degree among the mothers. He will do better perhaps, however, in order to avoid any unpleasant disappointments, not to strive for any marshalship or dukedom from the start, because at the present time there is no Katherine occupying any of the

more respectable thrones of Europe. But a moderate and sound ambition is certain of being fulfilled, with the previous conditions we have just mentioned. Such a ladies' pet would only do himself harm if he wished to add the graces of intellect to the physical graces he already possesses. It would be too bad for him to dim the brilliancy of his eyes by much poring over books. He might frighten away his fair admirers with culture or wit, and place a certain restraint upon them that would lessen their delight in his handsome physique. To be as handsome as a Greek god and as stupid as a carp in a pond—this will ensure any one Mohammed's Paradise on this earth, with the hours and everything else required to make it orthodoxically complete. Individuals thus equipped need a school as little as a genius needs it.

A genius, however is the rare exception, and human institutions are intended for average individuals only. A Beethoven, even without any school of music, will become what he is bound to become, but chorister's sons of the every day type, have to be held to the drudgery of counterpoint to enable them to obtain some Kapellmeister's position, with a right to a pension later on. We will thus not regard here all the categories of exceptional individualities,—the Apollos, the aristocrats of the first class, with their solid annual income, the sons of millionaires—none of these have to chase after success, success chases after them. My school of success is destined for the wretched multitude alone which is born without titles and incomes, and in spite of this fact, dreams of large bank accounts, and the order of the Red Eagle. These ordinary men now would enter upon the struggle for existence with far better prospects of success if they had been systematically trained to find their way through the press and turmoil of real life.

If the school of success were now established, the director ought to appeal to the conscience of every father who wanted to confide a boy to him, with this little discourse delivered in all candor: "Dear sir, will you first consider what you really want. If you destine your son to pass his life in an ideal world in which merit alone receives the laurel-wreaths, modest virtue is sought out in its place of retirement, and rewarded, where stupidity, vanity and wickedness are unknown and the good and the beautiful overwhelmingly prevail, or if you believe that your son will always place his self-respect above the applause of the multitude, and listen to his conscience alone, and not at all to the opinion of the crowd, and that he will be satisfied to do his duty and be praised by his inward monitors—then he has nothing to seek here. You will do far better in that case, to send him to any other school you like, and have him educated in the good old way. In that case he will read the poets of ancient and modern times, play with the sciences a little and swear by what the teacher says. But if you want your son to be a man whom others greet with deference in the street, who travels in palace cars and puts up at first class hotels, if you want him to have money and influence and be able to look down with contempt on all grim, famishing wretches, then leave him here. That he will ever have a place in Plutarch—this I do not guarantee; but I do guarantee that you will find his name some time in the political roll-call opposite some fine office."

The training school for success would of course have different departments, of a lower and higher grade, the same as the schools of fossil learning. As not every scholar is striving after a collegiate education and a professorship, thus not every ambitious fellow aims to be a prime minister or a millionaire. Many are content with more modest aims

and therefore require no more than elementary instruction. It will thus be advisable to divide the school into the common school department, the intermediate and the high school. The common school would be for those who wish to devote themselves to the more usual trades, to manual labor, trade, etc. It would only be necessary to impress one single elementary principle upon them, which the wisdom of the masses long since discovered for itself, namely, that "Honesty is the best policy." This does not sound at all like Machiavelli, but it can not be improved upon—it is the fact, once for all, that a man can best recommend himself in the humbler walks of life by carefulness and reliability. The shoemaker who makes boots well and 'pon honor, the grocer who, under the name of sugar, sells sugar and not sand, these will make their own small, modest way in the world and be happy, if they will be satisfied with the good will of their customers and their daily meat and vegetables. The same popular wisdom also asserts, however, that "Puffing is part of the trade," but when we take everything into account, and consider, we must come to the conclusion to avoid this point of view. The elements in trade are too simple to make humbug advisable. Even a stupid fellow sees too soon into lies, false pretences and bragging, and shies off. In these careers success is really the reward of honest ability, because every one is capable of judging for himself. Any one can see whether a coat is too tight or too loose, the most obtuse intellect can not fail to notice, if his bedstead comes to pieces, and only in a few social circles in Saxony will an admixture of chicory in the coffee fail to attract attention. The case is different in the higher professions. Any one whose choice falls on one of these requires a more protracted and careful preparation for success, and this he might gain in the intermediate and high school. In them

it is proposed to instil into the pupil a few fundamental principles that are entirely different from those which the usual systems of education endeavor to inculcate. Particular attention should be given to popular proverbs, for they often enclose a large kernel of truth. For instance, there is the sagacious, although ungrammatical German couplet: "Modesty, it is a jewel; yet, lacking it, fate's not so cruel." This is a golden axiom that can not be impressed too much. In fact, there is no greater, no more dangerous impediment in the way to worldly success than modesty. You may have the greatest merit, you may be the most highly gifted and accomplished of men, you may perform miracles of difficulty and usefulness—if you are modest you will never see the reward of your labors. Perhaps, some day, a monument may be raised over your grave; even this is not certain; but during your life time you will not get either money or honor. Modesty is to stand by the door and let others get the front seats; to approach the table timidly after the rest have finished eating; to wait until the food is offered, instead of asking for it, demanding it, fighting for it. Any one who acts in this foolish way can rely upon being left to stand at the door, upon finding the table cleared, and upon nobody offering him any food. "Be careful not to have the bad taste to speak about yourself." What utter nonsense! The reverse is what is right: talk always, exclusively, systematically, about yourself! Never mind if it does not entertain the rest. It interests you, in the first place. In the second place, you prevent any conversation about any one else, a rival perhaps, as long as you are speaking. And, finally, something of what you have said will always cling even to the most rebellious memory. Of course you will possess the simple wisdom not to mention anything but what is favorable about yourself. In this respect you



should not impose the slightest restraint or limitations upon yourself. Praise yourself, extol yourself, glorify yourself, be eloquent, inspired, inexhaustible. Lavish the grandest adjectives upon yourself, raise what you are doing or have done to the seventh heaven, illuminate it gracefully on all sides, claim superior excellence for it, assert that it is the most important production of the century, declare that the whole world is admiring it, repeat if necessary flattering criticisms of it that you have heard, or invent as you go along. You will see how fast you will get on by this system. The wise will laugh at or be disgusted with you. What do you care? The wise are an insignificant minority and the prizes of life are not distributed by them. Your rivals will also find fault with you. So much the better. You will anticipate them, assert that their remarks are nothing but envy and cite them as further proof of your greatness. The vast majority on the other hand, the multitude that makes success, will believe you, they will reiterate your judgment of yourself and make way for you to take the place you have usurped. This result is assured to you by the cowardliness and mental indolence of the masses. Their cowardliness causes them not to dare to contradict you, to show you your place, as the saying is. You will be accepted just as you are; your arrogance will be regarded as one of your characteristics, noticed perhaps for a moment and then never thought of again. If you are invited anywhere, the hostess will say to herself: "That man thinks he is of the greatest importance. No one can pay too much attention to him, or show him too much honor. What shall we do? I must seat him at my right at the table, or else he may take offence and go away feeling that he has been insulted." If some modest person of real worth happens to be there, to whom this place really ought to be conceded, he is very calmly addressed as

follows: "You have no objections, have you, to my giving him the preference? You are above all such trivialities," and you have as a settled thing the first place for yourself, you have accustomed people to yield it to you, and after a while, the idea that it might be otherwise will never enter any one's head. The mental indolence of the masses is the second guarantee of the expediency of your arrogance. Only a small number of men are capable of or accustomed to distilling an opinion out of the crude matter of facts, that is, collecting impressions, observing closely the results of experience, comparing, interpreting, digesting them in their mind, to come finally to some firmly founded individual opinion about them; but every one is capable of repeating a sentence spoken in his presence. On this account the settled opinions of others are accepted with joy and belief by the masses. It makes no difference whether these opinions are utterly false, nor whether they are in the most flagrant opposition to the facts. To become aware of this, the masses would have to be able to test and estimate the facts themselves in a logical manner, and this they are not capable of doing. I met with a remarkable instance of this not long ago. It happened that I had to prescribe some mead for a baby, to be given occasionally in teaspoonful doses. Half an hour after my visit to my small patient his mother burst like a bomb-shell into my room, and screamed in breathless alarm before she had fairly crossed the threshold: "Oh, Doctor, my child is dying! Hardly had it taken a few drops of that diabolical medicine when it turned black in the face and began to cough most dreadfully, and came very near strangling. Oh, what kind of stuff have you been giving the poor child!" I saw at once that the child had merely choked a little, but still I replied with a portentous mien: "Yes, I am not surprised. When we employ such heroic

remedies as mead, we must expect such effects." The woman wrung her hands and began again: "But how could you prescribe such a heroic medicine. . . ." "Do you know of what mead consists?" I interrupted her. "No." "It is a solution of honey and water." Her countenance expressed the same horror as if I had said: "Of sulphuric acid and rat poison." "You understand," I resumed, "that where we use such severe ingredients as water and honey. . . ." "That is so," she said with a sigh, and an expression of grief and bitter reproach. Just like this woman, the masses take everything literally that is said to them, and repeat it with blind belief, never distinguishing between truth and falsehood, between seriousness and mockery. To this, entire nations owe their renown and rank in the world. They have in reality all the worst and most degrading qualities, but they assert that they have the finest and noblest. They are envious and they call themselves generous, they are selfish and they call themselves unselfish, they hate and despise all foreign peoples, and they extol their universal brotherly love of humanity; they resist every progressive innovation, and maintain that they are the hatching houses for every novel idea; they have dropped far behind in every department, and they keep constantly repeating that they lead the way in everything; with their hands they force weaker peoples to become their servants and oppress them, rob them of their liberties, and violate the faith of their sworn treaties with them, while with their mouths they are proclaiming all the while the finest principles of justice. And the world does not take the trouble to look at the facts, but listens to what they say and repeats it with implicit belief. It does not notice that the hands are contradicting the lips, and it is convinced that those nations are really all that they claim to be.

So, no retiring modesty, young man, if you want to make your mark in the world. Humble yourself and every one else will humble you. Yield the precedence to another and the spectators will be convinced that it belongs to him by right. Call yourself of no account, your achievements of no importance, your merits over-appreciated, and your listeners will have nothing more pressing to do than to spread your opinion of yourself abroad, without mentioning from whom it came. It must of course be understood that I am not saying that modesty is to be cast aside under all circumstances. The time will come when it can be assumed without harm, and even with advantage. This is when you have fully attained your aim. As soon as you are in a position in which you are recognized, and which is really of first rank, and so surely defined that no one can be in doubt as to the place to which you are entitled,—then you can play the rôle of the modest man. Then you can remain at the door, you will be escorted in triumph to the platform; then you can decline compliments, certain that they will be repeated with embellishments and emphasis; you can then speak without concern of your insignificance, your decorations, your embroidered dress coat, will sufficiently contradict you. You will not detract from your influence, and you will gain the advantage that every one will be touched and enraptured with your humility.

You have now learned that appearances are of far more importance than reality. Drink as much wine as you want to, but preach water. This is always edifying even when your nose is blazing like some weird will o' the wisp, and your legs are no longer able to support you. If while you are declaiming Pindar's Ode in praise of Water, your lips are trembling in delirium tremens, you need not worry. Your audience will take it for emotion, and have only the more reverence for you.

Another fundamental principle is this: beware of being kind to others. With kindness you will never amount to anything. Your rivals will despise you, your enemies ridicule you, and your well-wishers consider you a bore. No one will have any consideration for you, for people will say: "Ah, yes, N., that good-natured fellow, if you tread on his toes he will smilingly beg your pardon most politely." Narrow-minded, foolish advisers may perhaps tell you that it is good policy to speak well of everybody, as by these means you may disarm possible enemies. Do not imagine anything of the kind. The reverse is true. As no one has any shooting to fear from you in return, they will shoot away at you all the merrier. You must be as full of malice as an old witch, and have as venomous a tongue as a snake. Your speeches must be sulphuric acid, and leave a ragged hole wherever they are taken home. A name that has passed through your mouth should look as if it had been kept for a week in a bottle of vitriol. Make yourself feared, and do not worry because you are making yourself hated at the same time. The cowards, who as I have already explained, constitute the vast majority, will treat you as savage peoples treat a malevolent deity—they will flatter you and offer sacrifices to keep you in good humor. The rest will perhaps pay you back in the same coin, it is true, but just consider what an advantage you have over them when you can reply with a shrug of your shoulders to the hostile remarks of some one whom you have calumniated: "The poor man is trying to revenge himself. You already know what I have always thought and said about him." Every unfavorable criticism of yourself is deprived of its influence in the eyes of the multitude if you have been shrewd enough to say all sorts of mean things beforehand and everywhere about your critic, for then you can represent it all as an attempt at retaliation.

A certain widely disseminated prejudice—that evidently originated with some unpractical idealists—is that we ought to make special efforts to win the favorable opinion and the respect of our compeers. Beware of accepting this saying as correct. Your competitors are your rivals. The vast majority crave success and nothing but success, just like you, and their room is diminished by the whole width of yours. Do not expect either justice or kindness from them. They will exaggerate and proclaim your faults, and they will be discreetly silent on the subject of your merits. You have only to concern yourself with two classes of men, the great multitude of those who stand beneath you, and the few influential persons in whose hands lie the honors, the positions—in short, your promotion. You must apply the laws of double optics to yourself, and learn to carry yourself in such a way that, seen from below, you will appear very large, and, seen from above, very small. This is not a very easy matter, but with practice and some natural talent, you can attain this proficiency. The masses must believe that you are a genius of extraordinary breadth, the chiefs, or high priests of your profession, on the contrary, must consider you an industrious, docile mediocrity, who swears by what his teachers say, and who spreads their fame abroad, and would rather die than strive to cast a shadow upon it by any criticism or by his own performances. If you understand how to let yourself be seen by those above and those beneath you at the proper focus all the time, then you need not care a snap for the opinion of your equals. You will be getting on in the world, and that is the main point in your estimation. As soon as you have left your competitors behind in the race, as soon as you are in a position to benefit or injure them, then you will have the pleasure of observing the rapidity and completeness with

which envious detraction is transformed into eloquent praise, cool reserve to glowing friendship, contempt to respectful admiration.

As a matter of course you must be careful not to neglect the visible manifestations of the philosophical principles by which you are to guide your behavior in the world. Only the very wealthy, against whose millions no one can insinuate a doubt, have the right to be modest in their way of living, but these have no cause to apply to my school of success. The poorer you are, the more necessary it is for you to make an imposing appearance. Dress richly, have your surroundings elegant, live as if *Golconda* was entailed upon you. But this costs money? Very true, and lots of it, too. But if one does not happen to have any? Then go in debt. Debt?! Certainly, my boy, certainly. There are few ladders that enable one to climb so rapidly and securely to the highest aims as debts. It is revolting when we reflect how they have been traduced by pedants, and brought into disrepute. The cruellest wrong has been done to them. Much extravagance and licence will be forgiven to the genius of Heine, but never his line: "Man, pay your debts!" What folly, what immorality! If you follow Heine's advice you are lost. Just consider for a moment: Who is going to notice you if you pay your way as you go along, in petty, narrow honesty? No one will turn to look after you. Join some threadbare company, live in an attic, eat dry bread, and never run in debt—you will soon feel the results. The dogs will bark at you, the watchmen will look you over with distrust, respectable people double lock their doors in your face. And the grocer, whose customer you are, will cease to take the slightest interest in you from the moment when you have paid him the amount of his bill. If you are stricken down in front of his store

door, his only thought will be how to remove the obstruction from his threshold. Then, on the contrary, get everything on credit, pump where you can, and your condition will be transformed as if by magic. In the first place all the enjoyments of life will be accessible to you that the poor beggar has to deny himself. Then your general appearance will arouse on all sides the most favorable prejudices. At last you will have a whole body guard or retinue of zealous, even fanatical, co-workers for your success. For each creditor is a friend, a well-wisher, an active agent in your promotion. He will not allow anything to befall you. No father will exert himself to such an extent in your behalf as a creditor. The more you owe him, the greater his interest in seeing you prosper. He watches over you that not a hair of your head be rumpled, for your life is his money. He trembles when any peril threatens you, for your ruin is the grave of his claim. Have quantities of creditors, young man, and your fate is ensured from the start. They will secure for you a rich wife, an exalted position and a fine reputation. The most fortunate investment is to apply the money of others to an ornamental formation of your own existence.

These would be the leading ideas according to which the nature of the students of success should be cultivated and their actions regulated. The most advanced pupils might also be initiated into the fundamental principles, upon which the whole science of training for success is founded. It admits of being concisely expressed:—Success in this world can be obtained in two ways, either by one's own superiority, or by the weaknesses of others. The first way is by far the most difficult and uncertain, for, in the first place, it assumes that one has superior advantages, which, however, is not the case of every one, and in the second, it is inseparable from the condition that these

advantages are noticed and appreciated at the right time and to a sufficient extent, which almost never happens in actual experience. Speculating on the failings of others, on the contrary, is always successful. The teacher would thus be justified in saying to his pupil: "Do not take the trouble to accomplish anything of extraordinary merit, to allow your work to speak in your behalf. Its voice is feeble and it will be drowned in the shouts of jealous mediocrities, its language is foreign and will not be understood by the ignorant multitude. Only the noblest and most unselfish will pay any attention whatever to your productions and appreciate them, and even they will hardly do anything for you if you do not intrude your personality upon their attention. So instead of wasting your time in honest and toilsome exertions, employ it in studying the weaknesses of the multitude in order to profit by them. The masses have no judgment, consequently make them accept yours; they are superficial and thoughtless, hence beware of being profound and crediting them with any ability for mental labor; they are dull-witted, hence you must appear upon the scene with such commotion that even dull ears must hear you, and dim eyes see you; they do not understand sarcasm, but accept everything literally; hence you must say distinctly and in the plainest terms, whatever you have to say bad about your rivals and good about yourself; they have no memory, so you can make use unconcernedly of every means that will help you on towards the goal. When you have once reached the goal, no one will ever remember how you got there. With these principles you will become wealthy and great, and it will be well with you on the earth."

If only some scholar whom I am initiating into the mysteries of success does not happen upon the impertinent idea of asking me: "As you know so well how it is done,

you must have progressed very far yourself?"....This would cause me some embarrassment. I could only reply then: "I have seen others attain success, and that is enough for me. Standing in the kitchen to see the soup prepared, one is apt to lose his appetite. But he may be willing for others to eat it, nevertheless."



## THE PSYCHO-PHYSIOLOGY OF GENIUS AND TALENT.

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I must define, and with as much precision as possible, the ideas around which revolve the observations to which this chapter is devoted. What is talent? What is genius? The reply to this query consists usually of unintelligible phrases in which nouns expressing admiration, and appreciative adjectives predominate. We ought not to rest satisfied with this. We do not want any complimentary oratorical flourishes, but an honest explanation. I think we shall be approximating the truth very nearly if we say that a being of talent is one who performs those actions which are generally or frequently practiced, better than the majority of those who have tried to attain the same proficiency; a genius is a man who invents new modes of action, never before attempted, or else practices an old faculty in some entirely original, extremely individual manner. I speak of a talented being and a man of genius, intentionally. Talent does not seem to me in any way restricted to the human race. It exists beyond all question in the animal kingdom as well. A poodle that can be trained to more complicated and artistic tricks than other dogs is a being of talent; likewise a robin redbreast or a blackbird, that sings better than his comrades; or even a pike that pursues his prey with greater success, or a glow-worm that shines more brightly. Genius, on the contrary,

is only conceivable in man, in so far as it manifests its presence in individuals. It consists in the fact that an individual strikes out a new path for himself, never trodden before, to use the familiar phrase. And this, as far as can be determined by human observation, not a single animal has ever done. It may be sometimes accomplished by races. They may thus be endowed with genius in common. The whole system of living beings most certainly does accomplish it. The evolution of organisms from the one-celled being up to man, proves this. We can thus assert that the organic world in its entirety is endowed with genius, that evolution and the possession of genius are synonymous terms, and the theory of the Descent of Man is merely a recognition and proclamation of the sway of a genius in the organic world. It is certain that even in the individual animal a limited freedom of development does exist,—an impulse to deviate from the inherited tribal type,—for the changes in the construction and functions of species, which we perceive after ages of development, must have been accomplished in the individuals after all. But the deviation from the established type and the effort towards a new, is so exceedingly slight in the individual animal that we must overlook it, because we really can not take cognizance of it. If a bee were to construct an eight- or four-sided cell, instead of a six-sided one, or a swallow to invent a new shaped nest, or if an ox were to prefer to die rather than be harnessed into a yoke—they would manifest genius. But the world has never yet seen anything of the kind, while it most certainly has seen human beings who were successful in accomplishing similar deviations from the inherited modes of action.

The difference between the talented individual and the genius, is thus one of quality, not of quantity. It does not escape my attention, however, that this difference could

be ultimately traced to a more or less, in every instance, if we carried our investigations very far into the essence of things. To illustrate this: a man must possess a certain amount of memory, will and judgment to be a professor of history. But these qualities combined only make a successful mediocrity, at best only a respectable degree of talent. But if they exist in an unusual amount, the one who thus possesses them may live to become a great statesman, a ruler of men, he may even turn the course of the history of the world, and he must be considered a genius. It is a fact that the difference is based upon the varying amounts of the same qualities only, but it is such a vast difference, that the two merely quantitatively differentiated phenomena produce the impression of being entirely unlike in their very nature, and not bearing the slightest affinity one to the other. In the same way the difference between Mont Blanc and a grain of quartz sand is only quantitative. At bottom they are one and the same. The quartz grain would only have to be big enough, to be Mont Blanc; the mountain would only have to shrink to an infinitesimal size, to be the grain of sand. And yet we find that the mere difference in size is sufficient to produce two such radically different objects as Mont Blanc and the grain of sand, out of things that are identical in composition.

I have already attempted to prove in the chapter, "Majority and Minority," that not every organism is capable of responding to impressions arriving from without, with an individual, new and non-inherited reaction of the nervous and muscular system, that is, by thoughts and actions. Only an organism especially perfectly constructed, especially rich in vital energy, is able to accomplish this. The genius—whose essence I imagine I perceive in the ability to assimilate the perceptions obtained from

the world without in an original way—thus presupposes a higher organic development. The key-board of his intellect has one more octave, as it were. No amount of industry, no amount of practice can produce this longer extension. It must be part of the original construction. Goethe remarks lightly and in the most innocent way possible: "Grasp the exhaustless life that all men live! Where'er you touch, there's interest without end." The "Merry-Andrew," in whose mouth he places this sentence, is evidently fond of a joke. The remark sounds very naive, and is in fact the proud vainglory of a sublime self-consciousness. "Grasp the exhaustless life that all men live...." Indeed! The receipt is a well-tried one, but it requires a genius to follow it. An ordinary man, or even a talented man, has no idea how to go to work to make this grasp, and if he attempts it, will withdraw his hand empty. This is because the average man, and I include the man of talent in this class, does not see the world at all, but only the reflection of it in the eyes of the genius. He does not see "the exhaustless human life" in actual presence, standing out in relief before him, but only as a shadow picture thrown on the wall by the magic lantern of genius. He may try to grasp these bright colored and shifting shadows, he will get nothing in his hand. The phenomena of the world form a raw material which the average man is unable to handle, and out of which genius alone can make anything that finally the former will be able to understand. If the average man sees certain things and events in systematic combinations, it is because genius has arranged the combinations; if life and the world appear to him in the form of pictures which he can pass in review before him, it is because genius has collected and framed them. He feels, criticises and acts as some genius before him, felt, criticised and acted for the first

time. Those objects which the genius has not organically manipulated, he passes by without perceiving, without experiencing any sensations from them, without criticising them.

I can not make these circumstances any clearer than by an illustration from the organic world. Those substances that every living being requires for its sustenance—carbon and nitrogen—exist everywhere on the earth in enormous quantities, but animals can not make use of them in any way in the form in which nature first offers them. An animal would perish in an atmosphere too heavily laden with carbonic acid, and on a soil too rich in nitric salts. Plants alone are able to make use of these raw materials for purposes of nourishment, and among plants, only those containing chlorophyl. Not until the plants have operated upon the carbon and nitrogen in their own organisms, do the latter become fitted to be the nourishment of animals. Precisely similar are the relations between the genius and the non-genius, the latter including the men of talent. The non-genius is not able to digest nature, to assimilate it, to transform it into elements of his own consciousness. He sees objects, but he forms no picture out of them; he hears, but he does not grasp and understand. The genius, on the contrary, has a certain something within him, a chlorophyl, as it were, which renders him capable of forming finished pictures out of the phenomena observed, which the average human intellect is then able to receive into its consciousness. Darwin gives us an amazing picture of the life on the entirely naked St. Paul reef in the middle of the Atlantic Ocean, in the first chapter of his "Naturalist around the World." Two kinds of birds make there their nests, the booby and a kind of sea-swallow, the white-head. But a certain species of fly, a tick and a moth live as parasites on these birds; a kind

of dung-beetle and a wood-louse derive their nourishment from their dung; numerous web-spinning species prey on the flies and moths, and we can add, what Darwin does not mention, that a whole world of microscopic beings, such as infusoria, cocci and bacteria is certainly swarming around these higher animals. All that was necessary, then, was the arrival of one bird to transform the desolate St. Paul reef into a home for a long train of living beings, which without the bird could not have survived a single day there. A precisely similar occurrence is that of the evolution of a system of literature in a nation. Some genius, with the mental digesting apparatus peculiar to him alone, takes the impressions perceived, and transforms them into a literary master-piece, comprehensible to all. Immediately a whole swarm of parasitical beings spring into existence. First come the imitators, who copy the original work with more or less skill. They are like the flies and ticks who subsist upon the sea-swallow's blood. Then come the critical and esthetic schools which no longer have anything to do with naked nature, but devote themselves exclusively to the results of the digestion of this nature by the genius and his imitators. These are like the spiders who follow the flies, and the dung-beetles who live on the guano. And last of all come the historians of literature, who proceed to relate with immense importance how everything came to pass. I can not find the living being on the St. Paul's reef at the moment, to correspond with these, as I do not quite venture to compare them to the microbes. Thus we have a grand national literature, with esthetic works of the second rank, with esthetic systems, with clever, critical works, with histories of literature and special essays on isolated passages in them, with learned commentaries on all these books, and with a whole train of professors who make their living by lecturing upon

them with great profundity, from year's end to year's end, and all these literary productions, with their living train of learned men, have their origin and their excuse for being, solely in the creations of some honest genius, who was neither a learned man nor a professor, who produced his master-piece as an apple-tree bears apples, just because it was organically in him to produce it, and all the rest of the little folks who followed after him would not have known enough to say Bah! to naked nature placed in front of them, and they would not even have made their appearance any more than the scanty animal life on the St. Paul reef, without the bird that alone made existence there possible to it.

Genius thus depends on a primarily more exalted organic development; talent on an extreme cultivation—attained by industry and practice—of the natural faculties possessed by the majority of sound and normal individuals in a given race. But if I were now to assert that genius has a physiological, structural foundation, the reader would be justified in asking me what the structural tissue could be, whose more exuberant development produced genius. This question looks rather formidable, but yet it might not be so difficult to answer, perhaps, if genius or talent were simple phenomena. We could then obtain the answer to the problem by a very simple method. In one case we find a remarkably fine memory, in another, an extraordinary will; in these two cases the brain centres which represent the memory or the will are thus exceptionally developed. As to which are these centres, we are not fully informed at present, but they will be found in time, and we are already on the track of several. In this way it would be mere child's play to analyze and explain the exceptional intellectual phenomena. Yes, but unfortunately the matter is not such a simple one. Genius

and talent are extremely complex phenomena; very rarely do they declare themselves by the prominent manifestation of some single principal mental faculty; even if such a faculty does predominate in most cases, and can be determined by careful investigation, there are almost always several principal faculties engaged in producing the combined effect of genius or talent, although in unequal degrees, and the different proportions in which they enter into the composition produce such different results, that it is often extremely difficult to decide from them what were their organic causes. The whole art of physiologically analyzing genius, as well as talent, will thus consist of resolving what appears to be a homogeneous whole into its elementary factors and tracing these latter to their source in the organism.

Every educated person knows now-a-days that our central nervous system, that is, the cerebrum and cerebellum, the medulla oblongata, the spinal cord, and the sensory and motor nerves, does not form one continuous organ with one simple function, like the heart or the kidneys, for instance, but a combination of numerous organs, similar in regard to their construction but with entirely different functions. It resembles, as a whole, the system of digestion. The whole mechanism of the digestive organs, from the entrance to the exit, with all their auxiliaries, forms one single apparatus, the different parts of which all work together with the purpose of rendering the nutriment received fit for the construction and maintenance of the organism, by mechanical and chemical changes adapted to the end in view. But how dissimilar are the separate constituent parts of this grand apparatus! The salivary glands have nothing in common with the pancreas and the liver; the stomach is arranged in an entirely different manner from the duodenum; the gastric glands

differ in every respect from the intestinal absorbents. Here a liquid is excreted, which transforms starch into sugar; in another place a similar liquid, which renders the insoluble albumen dissolvable. Here is some tissue whose exclusive function is to move the food-matter along; near by is another which has to close the way to it, to effect a temporary stay, and still another is occupied in absorbing alone. In the same way the central nervous system in its entirety performs the grand, complex function of affording communication between the Ego and the Non Ego, or to express it in less technical terms, between the external world and the individual, transforming impressions into consciousness and allowing this consciousness to act in return upon the external world. But this function is divided into numerous and very dissimilar separate branches of duty, which are performed by entirely different parts of the brain and spinal marrow. I will explain this by a single instance. Let us take the sense of sight. Any one looking at this subject from an unprofessional point of view would probably think it a very simple matter to pick up a newspaper and read what was printed on it. That he would not be able to do this if he were blind, is also self-evident to him. But he would perhaps be very much astonished if he were told that a seeing eye is not all that is necessary to perform the act of reading, that the coöperation of a series of other organs, situated in the brain, is required also, and that reading is impossible if even a single one of these organs fails to work properly. The ball of the eye serves as a sort of a dark chamber upon the rear wall of which falls the image of the external world, diminished in size and as distinct as possible. This background is an expansion of the optic nerve which transmits to the brain the impression received, that is, the image cast on the retina. The impression is felt at a certain spot

in the brain, which is most probably situated in the rear of what is called the proper ganglia. The impression is finally comprehended at still another point which may lie in the lower left lobe of the brain, as the investigations of Kussmaul, Westphal and others have determined with considerable appearance of accuracy. The eye thus reflects the external world; the reflected image is transmitted by the optic nerve to the proper ganglia; the ganglia transform the reflected image into a sense-perception, which is transferred to the gray brain-matter and, after being operated upon by the latter, becomes a conscious idea. If the eye is incapable of performing its duty the image is reflected to no purpose, and the communication between the Ego and the Non Ego by this means, the sense of sight, ceases entirely. If the optic nerve is diseased the external world is reflected on the proper place, it is true, but the image fails to be transmitted to the spot where it is first felt. If the rear part of the proper ganglia is out of order, the image may reach the brain, but there is no one there to receive it, as it were; it is as if there were telegraph communication, and no receiving instrument in the receiving office. The image is then not felt. If, however, the brain matter in the lower left lobe be disorganized, the image will be felt but not understood, its significance not realized. The man may see, but he will not know what he is seeing. It is as if, continuing the simile of the telegraph, the receiving instrument were in place and the dispatch duly received at the office, but it could not be delivered to the person addressed. Thus it is with every single effort of the mind, every act of the will, every sentiment and every idea, and however plain and simple each effort may appear, in reality it is something very complicated, in the realization of which the numerous parts, that is, organs, of the central nervous system, materially unlike in structure, all play their part.



These separate organs situated in the spinal cord and the brain are called centres, and they have been classified according to their importance. We speak of higher and lower centres. Their station on the ladder of rank is of course determined by the function they are destined to perform. But the estimate of the value of these functions is based not upon their importance in the preservation of life, but upon the share they have in producing the specifically human attributes. There are certain faculties possessed by man alone; for example, the faculty of abstract thought and speech. Others that he possesses in common with the animals; for example, the memory and the will. And there are still others which he shares with all living beings; for example, nutrition and procreation. (Of course it is not to be understood that even the most specifically human of all our powers, thus even the example just mentioned, abstract thought or speech, are necessarily exclusively human, because they appear fully developed in man, and there is no trace of them in the animals below him in rank. According to Romane, the English animal psychologist, it is rather a matter beyond all question, that the intellectual activity of our race is merely the intellectual activity of animals cultivated to a higher degree, and that even in this as well as in everything else, nature has only the grand general lines of uninterrupted development with no chasms and gaps. But this is not the place to discuss this matter at length.) The rank of a function and consequently of the nerve centre which controls it, is thus in an inverse ratio to its distribution in the organic world and its importance to the preservation of life. Without the coarser and more delicate alimentary processes, that is, without digestion, respiration and the circulation of the blood, the organism could not exist for a moment. But the digestive centres in the

ganglia of the so-called sympathetic nerve, and the centres of the action of the muscles of the chest and heart in the medulla oblongata, are considered the lowest of all. The movements of the limbs and especially the proper combination of these movements to produce the acts of walking, grasping, etc., are of great importance to the individual, but still he could live without them. But the centres of muscular activity and their harmonious action (coördination is the technical term) in the spinal cord, and probably in the peduncles of the cerebrum, perhaps also in the cerebellum, are the next highest in rank. The memory, the faculty of judgment and the imagination, in conclusion, are not at all inevitable conditions of life, but are delightful luxuries; the individual can continue to exist very comfortably years and even tens of years without them; but their nerve centres in the gray cerebral matter rank the highest of all. This classification is by no means arbitrary; it is justified by facts. The more common and necessary a function is, the simpler and coarser the organs for it; as the functions become more individual and differentiated, the organs become more delicate, more complicated and therefore more fragile. A plough is a more important necessity of life, and is used by more persons than a watch, and the watch is more necessary and more widely distributed than a "precision instrument" made for the purpose of comparing a meter stick with the Paris standard meter. But the plough is much coarser and simpler than the watch, and the latter is much coarser and simpler than the "precision instrument." It is not an easy matter to destroy a plough; a watch must be handled more gently, but it will stand many a hard knock; the "precision instrument" is thrown into disorder by even the shaking of the ground caused by a carriage driving past at a distance. The case is the same in regard to the nerve centres. The more individual,

the more special and exclusive the task required of them, the more complicated, the more delicate and consequently the more fragile they are. Nutrition is a coarse function, for instance. Strictly speaking, it does not require any special organs, as we might also dig a furrow without any plough, with merely a ploughshare, a stick or a stone, or even with the bare hand, but of course not so easily or conveniently as with a plough. The simplest little lump of protoplasm has the power of receiving nutriment, using the word in its broadest sense, by absorbing solid, fluid, and gaseous matter, and thus also of digesting and breathing. If we require a highly complicated apparatus for this performance, such as the system of the circulation of the blood, of respiration and digestion, it is only because our organism has necessarily more complicated tasks to perform than a lump of protoplasm, and is organized with a view to a division of labor, as a cabinet minister, for instance, has neither the time to cook his own dinner nor to mend his clothes, matters which a Neapolitan beggar, on the other hand, can attend to very well. At the same time, even in our complicated organism, which operates with such an extensive division of labor, the process of alimentation is a common and simple matter, and the nerve centres controlling it are so coarse that they resist destructive influences the longest, and are in fact the last to die. The centres of movement are also rather low, and are therefore strong in proportion. Very little is required of those centres which are in the spinal cord. When the sensory nerves convey the information to them that some external force is acting somewhere upon the body, manifesting itself in the form of a simple contact or of a pain,—they have to cause certain groups of muscles to contract, to prevent this in others, and in this way to produce a movement adapted to the end in view, which is to remove the body beyond

the reach of the external force. This is called a reflex movement. It occurs without volition, without even the knowledge of the consciousness. A frog whose brain has been removed can perform it. The centres of motion are limited in intelligence, not to say stupid. They are not able to distinguish the motive cause of the information brought to them. They are only able to respond to the external excitation with the simplest efforts of motion. If the body can remain exposed to the external force without danger of injury, a higher nerve centre has to command them to keep still. If, on the other hand, the simple withdrawal is not sufficient, if the body is to run or jump away to escape from some external influence, a higher centre must again command them to set in motion the proper groups of muscles whose combined action is to produce the running or jumping. And, last of all, those centres in the brain whose sole purpose is to produce volition and consciousness, are the highest of all, as their work is the most varied and the most complicated, besides being exclusively human, and requires, to be correctly performed, such an accurate concerted action of so many delicate parts, that even very slight influences suffice to disturb the ultra-sensitive apparatus, the same as a very slight impression will start it. The higher a nerve centre, the later it develops to maturity, the longer the organism works to perfect it, and it wears out the earliest. The classification of the nerve centres is thus not an arbitrary one. It is not determined by an individual opinion in regard to the greater or less importance of their functions, but is drawn from their very nature. A quibbler might say: "Opinion versus opinion—I rank the centre of nutrition higher than the centres of memory or judgment." The reply would have to be, that his personal inclinations were leading him into error, that the centre of nutrition could not

possibly be the higher, because it is distributed throughout the whole of the animal kingdom, because it appears at the first moment of individual existence and lasts to the extreme limits of the organism's decay, and performs an invariably regular task, never individually modified, while the centres of memory and judgment do not appear except in the higher animals, and in the individual do not make themselves manifest until a certain degree of development is attained; because as a rule they become dulled and useless before the natural death of the organism, and because the work they perform must conform to all changes in the surrounding circumstances.

The new Darwinian biology considers even the highest animal organism, that of man, as merely a colony of simple living beings, with a comprehensive division of labor, and a difference between the individual colonists depending directly upon this distribution of tasks. Primarily, each cell of which we consist, is an organism in itself, which can do everything that an organism, wishing to continue to exist, has to do; the cell can receive and assimilate nourishment, it can propagate in the simplest way, by partition, and it can move by contracting its protoplasm. But when countless millions combine to form an animal or human organism, they proceed to divide among themselves these different occupations, so that each one can perform but a certain appointed task, forgets how to perform any other, and as a consequence, would have to perish if the other cells did not do for it what it is no longer able to do for itself. The red blood corpuscle can absorb oxygen and convey it to all the tissues, but it has ceased to be able to move and propagate. The muscular fibre can move and drag the rest of the formations of the body along with it, but it could not absorb unprepared nutritive matter from nature, and could not propagate, etc.

With all the equality that originally prevailed between the elementary parts, or, to retain the term used above, between the citizens of the colony, a very strict system of ranks has since been developed. The organism is a complicated system of society, with proletarians, citizens, and reigning classes. It includes elements which represent the most varied stages of development in animal life. The blood corpuscles and lymph cells rank no higher than bacteria, with whom, by the way, they often have to contend, and by whom they are sometimes defeated, although as a rule, they prove themselves the strongest. Man's spinal cord ranks no higher than a frog's, his sensory centre no higher than a monkey's, his language centre no higher than that of a human being of the lowest race—a Bushman, for example,—the exalted centres of thought and of judgment alone raise the indefinite organism above and beyond all other living beings, causing it to be not only a living being, not only a vertebrate animal, not only a human being in general, but a special human being, an individual distinct from all other individuals, and towering above all the rest if these centres are developed to an especial degree.

This hierarchy within the organism does not preclude a certain independence among the separate classes. One might say that they were constantly fighting among themselves for the principles of democracy and aristocracy. The lower centres do not like to be ordered about by the higher ones, the higher strive in vain to escape from the tyranny of the lower. The brain centres can not prevent the assimilating centres from doing their work, they can not compel them to do this work in any particular way, more rapidly or more slowly; the action of the blood corpuscles, the lymph glands, etc., are entirely beyond the control of the consciousness and the will. Only indirectly are the brain centres able to prove that they are the most

powerful after all; they can deprive these lower centres of the conditions in which alone they are able to perform their functions, by preventing the entrance of food into the stomach, for example, or of air into the lungs, thus rendering it impossible for the digestive glands and blood corpuscles to perform their allotted tasks. And vice versa, the lower centres also retain the higher in a state of bondage, as the latter are only able to accomplish their best work when the former are performing their duties regularly and perfectly.

Democratic tendencies are prevalent not only among the lower classes of the colony which forms the organism, its whole system of government is also a democratic one, or at least, very unlike a monarchy. We have not one single centre that lords it over all the other centres of the organism like an absolute monarch, but several, which have all an equal rank and are invested with exactly the same amount of respect and power in the organic colony. Three at least, of these centres can claim to be regarded as the triumvirate which decides all sovereign matters relating to the organism; they are the centres of consciousness, memory and volition. (At the same time it is a mere assumption on my part that these three faculties have established centres; it has not yet been proved, and it might even be possible that a still profounder investigation might result in the discovery that consciousness, memory and volition are not elementary, but combinations, which might be reduced to elementary constituent parts.) They have a certain influence upon each other, but are independent at the same time. They must act in concert, if their action is to be useful and beneficial to the organism; but this harmony is often absent in cases of mental disease, and even when the intellect appears to be in a normal state of health. Men sometimes lose their

memory while retaining their consciousness. And in the same way the will-power may be lost while the consciousness is preserved. Volition and memory, on the other hand, exist sometimes when the consciousness is absent, as for instance, in somnambulism and in several forms of hypnotism. And even when all three centres are working normally, they each usually go their own ways, which may sometimes run parallel, while this is by no means always the case. We know that the memory is entirely independent of the will. It summons conceptions before the consciousness that we have neither sought nor demanded, and obstinately refuses us others which we have exerted all our energies to remember. In the same way the will is entirely independent of the consciousness and all its substance. In vain we persuade and convince ourselves, with all the powers of our judgment, that a certain action ought to be performed,—yet we do not do it. The consciousness is completely convinced, but the will pays no attention to it. Or we prove to ourselves with the most unanswerable arguments that we ought to refrain from a certain action. The will listens, allows the stream of argument to flow past, and at last does the very thing to which the consciousness so strenuously objects. The highest centres are thus entirely independent of each other; they sometimes agree to act in concert, then again they conflict and interfere, and in fact are contending for the supreme authority throughout the entire life of the organism.

We have already seen, in the chapter, "Majority and Minority," that the highest centres require a very rich and complete development to be able to produce new combinations, that is, to respond to impressions received from without with thoughts and actions such as were never conceived before, and which are entirely without precedent, while these centres, at a lower stage of development, act only

according to the traditional and inherited way, that is, they do exactly as they have been in the habit of doing on similar occasions, and as was done by their parents before them. Every form of activity that is repeatedly practiced, becomes organic. That is to say, the relations which must exist between the nerve cells and the nerve fibres to produce this activity, by frequent repetition become fixed and rigid, so that it proceeds automatically. Notwithstanding all that Herbert Spencer may say against the introduction of illustrations and analogies in the explanation of psychological processes, it is still a good way to make this exceedingly difficult matter intelligible to the uninitiated. Hence I do not hesitate to introduce a crude and therefore all the more pertinent illustration to explain what is meant by this organic and inorganic vital action of the brain centres. The organic action stands in the same relation to the inorganic, as the music produced by a music box to that produced by a professional pianist. The music box plays the piece for which it was built correctly to the end, if it is wound up; but of course it can not play any other than this one piece. The virtuoso, on the other hand, can play every piece the notes of which are placed before him, and, if endowed with unusual talents, will invent new compositions and play on without referring to the notes of others. In the average masses the brain centres are like the mechanical music box; they play no pieces except those for which they were constructed, which have become organic in them. Who was the mechanic that arranged their works for the given pieces of music? It was the long line of progenitors who kept playing the same compositions over and over again in the same way, until the instrument, from being originally played by freely moving fingers, became at last an automaton. In the exceptional men, on the contrary, the brain centres are like the virtu-

osos. They can play pieces that no one ever heard before. Their *repertoire* does not consist of a few pieces which they keep strumming over and over again, but changes constantly, and without any limitations as to number. One question still remains: why do frequently repeated actions become organic? Or to retain the illustration already selected: why does a freely played piece become fixed in the cylinder in the music box by frequent repetition? My answer to this can be but a hypothesis, which, however, harmonizes with all that we know of nature's laws: I say that it is due to the operation of the universal law that everything in nature is done with the least possible expenditure of force. When the will or the consciousness have new combinations to form, they require a large expenditure of nervous energy. Each movement of the labor to be performed must be ordered and superintended. Now this expenditure is obviated if it is possible to perform automatically those actions which are frequently repeated. Then a single impulse is sufficient—which can be produced by some mere impression on the senses, or some command of the consciousness or will—to set the mechanism in motion, and the work is performed from beginning to end, without the highest centres having to pay any attention to it, take part in it or issue any separate orders. This is surely the reason why frequently repeated actions are no longer controlled by the freely working highest centres, but proceed automatically, that is, organically. This tendency to economize labor and energy by a transformation as comprehensive as possible, of free into automatic activity, is so marked that its influence is constantly felt not merely by the race but also by the individual. It does not require a long succession of generations to cause certain actions to become organic in the centres that perform them; it is accomplished in a very brief space



of time, much less than the life of a human being. Even the most energetic organism—that is, according to my previous definition, the most original organism,—sees his originality become automatic, and although he may retain his originality as regards other human beings, he is no longer original compared with himself. He becomes like a music box which mechanically repeats the musical arrangements peculiar to it alone. This explains the reason why the most individual genius comes at last to have mannerisms, and the honest cobbler in the story was not so far out of the way in his criticism of the beautiful painting, when he remarked that it must have required years of habit to produce a work like it.

The automatic workings of the highest centres do not appear to the consciousness as ideas, but as emotions. Only those forms of activity which proceed from beginning to end in the consciousness, that is, which commence with some impression on the senses, become next a sensation, and after leading to some surmise as to their cause, are stored away in the memory, and contribute to form a judgment, which the will is particularly commissioned to execute—those forms of activity alone are apprehended by the thinking Ego as distinct and clearly defined ideas. Those forms of activity on the other hand, which occur without any direct intervention on the part of the consciousness, which consist therefore of a succession of organic acts, performed mechanically by some centre when incited thereto, as a music box plays its piece, these activities are only apprehended as indistinct, confused impressions on the mind, or—to retain the sufficiently definite technical term—as emotions. This distinction must be constantly borne in mind. It is the preliminary assumption to all that I still have to say in this chapter, and I shall draw many other conclusions from it throughout the

remainder of this work. We must never forget that what we call the consciousness is not the entire organism but only one separate organ in it, comprehended in one brain centre, that it is, in short, not *the* consciousness, but *a* consciousness. Each centre has its own separate consciousness, of which, however, the highest centre of all, the one that forms the foundation of our thinking Ego, of our intellectual personality, receives no information, or at most only an indistinct one. Our Ego, that is, the highest brain centre, learns nothing, or nothing exact, in regard to the processes occurring in the centres in the spinal cord and the sympathetic nerve. And yet, it is beyond question that these centres have each their consciousness as well, although but a limited and subordinate consciousness, so that they are conscious in each instance of the actions and the orders to be given to the tissues under their control, with which they are to respond to the excitation. We must imagine the consciousness as an inner eye contemplating the centres and their activity through a kind of microscope. The field of view of this microscope is comparatively limited, the observing eye sees nothing of all that lies outside of it, nor even the beginning and the end of those pictures which extend across the narrow field of vision. The consciousness becomes aware of the ultimate results of the vital activity of other centres, but not of their beginnings and course of development. When memory slides some image across the field of view of the consciousness, it sees them; but it sees and knows nothing as to how it was produced, nor whither it is gliding. The case is precisely similar where the will is concerned. The consciousness sees the results of the vital activity of the will centres, that is, the combined movement of certain muscles, or a series of movements adapted to the end in view. But as to how the innervating impulse, that is,

the power which, acting through the nerve conduits, causes the muscles to contract, is evolved, of this the consciousness is and remains ignorant. The ways in which the consciousness takes cognizance of its own special activity and of that of the other centres, as they become visible to it on its circumscribed field of view, differ in every respect. Its own operations, which it commences and finishes itself, and all the separate parts of which it has prepared itself, leave no feeling of uncertainty and dissatisfaction in it. For they are ideas, as I said before; ideas, that is, things both bright and clear. The operations of the other centres, on the contrary, of which it has only a partial knowledge, over which it has no direct control, whose separate parts it can not distinguish with any accuracy, whose beginnings, growth and end it alike fails to see, are the cause of a certain uncomfortable and strained sensation, such as the eye experiences when it is vainly striving to see distinctly something very far away, very small or very dimly lighted; it is a realization of its own limitations, a realization of its own weakness and incompleteness, a combination of curiosity and uneasiness, and the longing for increased knowledge. This sensation is emotion, which we feel in our consciousness as premonitions, longings, confused excitement, and vaguely defined wishes. The distinct and clearly defined work of thinking—this vital activity on the part of the highest centre of consciousness, which I will call by the term cogitation, as opposed to emotion, is accomplished only by those more thoroughly equipped individuals, who have the power of producing new combinations. The average masses, whose centres work automatically, who represent such combinations only as are already organized, are restricted to emotion. By far the largest majority of human beings never have a single clear, thoroughly illumined idea in

their consciousness throughout their entire life. Their consciousness never sees any other than vague, dim pictures; they would not be able to describe with any distinctness what is going on in their minds at any given moment; every attempt to do this would sink at once into indefinite babblings and meaningless commonplaces without relief. They live on emotions exclusively. Emotion is thus what is inherited, cogitation what is individually attained. Emotion is the vital activity of the race, cogitation, the vital activity of the individual.

Notwithstanding the fact of their vagueness emotions are subjectively more agreeable than cogitation, though they leave the consciousness unsatisfied and even uneasy; this is owing to a triple cause. In the first place it is easier,—that is, it requires less expenditure of nervous energy, as labor performed automatically by the nerve centres is less trouble than free and conscious labor,—and easiness is regarded as pleasure, and effort as trouble or pain. In the second place, the inability experienced by the consciousness to see with any definiteness the processes taking place in the centres which work automatically—the emotions—includes an element of anxiety along with an element of fascination and excitement. The consciousness endeavors to surmise what it does not know; it tries to picture what it can not see distinctly. And this activity on the part of the consciousness is nothing but the imagination aroused to action by the emotion. But we know by experience that imagination is one of the agreeable manifestations of the active consciousness. In the third place,—and this argument has been already advanced by Darwin,—the most important activities of the organism are also those most frequently practiced; those organic processes therefore which, as a general thing have become automatic through frequent repetition, are the most im-

portant for the preservation of the individual and of the race. And as these processes are apprehended by the consciousness only in the form of emotions, it follows that the organism ascribes the highest importance to the emotions as the most essential and important manifestation of organic vital activity, that is, in subjective terms, it experiences them the deepest and the most intensely. The reverse of these three arguments is true in regard to cogitation. It can not be experienced as more agreeable because, in the first place, it is too difficult and inconvenient for the average organism, in the second place, because it does not arouse that delightful play of the consciousness which we call imagination, and, thirdly, because at the first glance it does not seem important and essential to the organism, which knows that it has existed without it hitherto, and it has first to demonstrate its importance or utility by finding frequent opportunities to repeat itself, with appreciable advantage to the organism. In this latter case, however, it soon becomes organic and is transformed from cogitation into emotion. These suppositions throw light upon a number of hitherto obscure phenomena. The Romantic school, which prefers the old to the new, and considers the Middle Ages more "poetic" than our own times, which raves over a ruin and calls a building adapted to its purpose and in good repair, an abomination, this school has its roots in the facts that old, traditional ideas arouse the centres to automatic action, and consequently, are apprehended as emotions, while the novel ideas, not organic as yet, require an effort of the consciousness to consider them, and thus produce cogitation.

The old stage-coach aroused emotion in the minds of the generation that last had used it, the railroad, cogitation; thus the contemporaries of the great revolution in our means of transportation considered the stage-coach

poetic, the railroad dry and prosaic. The whole of poetry and its operation are based upon this radical difference between emotion and cogitation. The substance of poetry is general human relations, circumstances and passions, that is, frequently repeated organic activities which have become automatic; it is therefore produced by emotion and it arouses emotion. Even in its forms of expression it retains all the old ideas, not accidentally, but necessarily, because it is comprehensible that inherited ideas should appear also on the consciousness' field of view in the garb in which the ancestors transmitted them to posterity. For this reason poetry still alludes to spirits and fairies and gods; for this reason it still anthropomorphizes nature and the affections; for this reason it arms its heroes with arrow and club, instead of Henry rifles; for this reason its travelers proceed from place to place on their noble steed, instead of taking the sleeping car; for this reason it retains the cosmic conception of the infancy of our civilization. It has nothing to do with modern ideas and forms. It does not feel at home in the views and institutions of the day. They are too new for it; they are as yet not organized; they have not yet become automatic; they are not yet emotional, but cogitational, to express it in one word. For this reason every attempt to give to poetry a modern substance is utterly ineffectual. When sometimes a rhymster sets himself the task of constructing what is called practical poetry, and introduces science into his verses, he only demonstrates thereby that he has not the slightest intimation of what the essence of poetry really is. Poetry is emotion; to attempt to make cogitation of it would be like attempting to transform a dream into wide-awake reality, without its ceasing to be a dream. But the transition from cogitation to emotion will soon follow as a matter of course. It is only a question of time. What is

new today will be old a thousand years hence. What is individual today will belong then to the race, having been handed down from one generation to the other until it has become organic. By that time a railroad station will seem quite as poetic as a ruined castle today, a Krupp gun the same as a lance, a reference to an electro-dynamic machine or to a bacillus as poetic as now one to the wings of song or to the nightingale's lament. For we must not forget that all this old-fashioned paraphernalia of poetry was at one time fully as new, that is, as cogitational as are now the railroad, modern firearms and our natural science. At that time the knightly armor and the castle on the mountain peak were considered just as prosaic and matter of fact as we now consider a shooting jacket and a barracks, and nothing but what was old then, was surrounded with the poetic halo. This is not mere assumption, we have established data for this assertion. Almost all ancient peoples associated certain religions, mystic, and thus emotional ideas with stone implements, after they had been in the possession of bronze articles for centuries. The stone article was to the savage of the bronze and the preceding iron age, what all the mediæval rubbish is to the sentimental enthusiasts of our age.

There are generations, ages, peoples, and epochs in which the automatic activity surpasses the freely combining activity of the highest centres, in which emotion prevails over cogitation. Woman is far more emotional than man, as her highest centres scarcely ever attain to the most advanced state of development, which occurs much more frequently in man. The child, whose centres are not yet matured, and the aged person in whom they have already begun to decay, have almost nothing but emotions, without any cogitation. In sickness and convalescence, when the organism and thus the whole central nervous sys-

tem, is still feeble, it is only capable of emotions. Mental affections first announce their appearance by the facility with which the person affected changes his moods, becoming morose and gay in turn, that is, by the variability of his emotions. The Chinese and the modern Latin races are emotional peoples; they allow themselves to be impelled by semi-conscious moods, that is to say, by the inherited automatic activity of their centres, and produce but very few individuals in whom the highest centres are powerful enough to restrain this tendency to automatism ("to inhibit" is the technical psychological term) and produce free combinations, that is to think for themselves, to be cogitational. The Middle Ages were one long single epoch of purely emotional character. What was traditional was all-powerful. The individual was entirely lost in the family, the corporation and the class. For almost five hundred years there was not a single brain centre that was capable of cogitation. Consequently the whole epoch had to be sentimental, religious and mystic, adjectives which none of them mean anything else than that lack of distinctness with which, as we have already seen, the automatic activity of these centres comes to the consciousness of the individual.

The detailed explanations to which I have been devoting myself hitherto, may have seemed somewhat discursive, but those readers who are not professional psychologists will find them of the utmost importance as a preparation to what is to follow. Now for the first time he can understand what I meant when I said that genius and talent could be traced directly to the degree of development attained by certain centres. In what part of the brain we are to look for these centres, whose special development is revealed by some special powers, this is something of which in most cases we are still ignorant. But it is not

beyond the range of possibility nor even of probability that the combined investigations of the clinical medical scientists, the pathological anatomists, and the experimental pathologists, perhaps also the systematic examination of the brains of specially eminent men, which has only recently been commenced, may result in determining the exact location of the different centres.

Those people who consider intellectual activity to be the work of a soul, that is, of some non-material guest in our material body, will think the explanation of the phenomenon of a genius and even of a talent either absurdly self-evident or else utterly impossible. It will not benefit them to say that Peter has more soul than Paul, as where there is no matter, there can not be any size, which is an attribute of matter alone, nor any intensity, which is an attribute of the force associated with matter alone, consequently not any more or any less, but only the single unity forever. Just as little can they say that the different souls vary in regard to their composition, that the question is no longer in regard to a more or less, but of a something else; for a difference in the essence of something non-material is as difficult for the brain of man to conceive as a difference in the composition of matter, which from our point of view is supposed to be homogeneous, unchangeable and always like to itself. Thus only the one explanation—which is none at all—remains, that by the grace of God some one soul is endowed with a richer activity than the rest. But those people who on the contrary believe with modern science that intellectual activities are the work of certain organs—the nerve centres in the brain—will understand without the least difficulty how a better developed organ can perform its allotted tasks more perfectly than one less developed. Why this or that centre should be better developed in one individual than

in another, it is true, is in this way still unexplained. But this officious Why, which is always inquiring for the ultimate cause of all phenomena, is carefully shunned by exact science altogether.

We need not dwell long upon the subject of talent. It has no anatomical foundation. It is not due to any special development of the centres. Neither in essence nor even in quantity, does the talented man differ from those people in whom we do not perceive any talent. I am almost tempted to express this thought still more abruptly, and say that there is no such thing as talent. At least, we must not attempt to express anything specific by this term. Talent—that means, industry and opportunity, opportunities for practice and development. Every normal human being, which term excludes all forms of disease, decay and a lower degree of development than that attained by the average type of white humanity at the present day, has in him all that is needed to perform any form of activity in the way that is generally said to reveal talent. He has only to devote himself exclusively or mainly to the one form of activity he selects. We can make whatever we choose out of any perfectly healthy average child, by drilling it for it, with common sense, sufficiently long and sufficiently strictly. With the proper training it would not be a very difficult task to form regiments and even armies, of whatever you want, artists, authors, orators, scientists, without any previous discrimination, by lot and chance, as recruits are enlisted in the army, and every man of this army would have to be accepted unconditionally as a man of talent. On this tacit assumption the whole of our system of education is founded. The school takes it for granted that all the scholars are equally endowed and are able to attain the same aims of cultivation; hence it has for all the same



systems of instruction, the same lessons, the same subjects to be studied. If, however, there happen to be satisfactory and unsatisfactory scholars, this is owing to the greater or less industry of the pupils—with the exception of those of imperfect, that is, non-typical, diseased development—or to their opportunities for devoting themselves more or less exclusively to the tasks allotted them in the school. To be sure, this army of scientists, orators, poets, artists, etc., will never create anything new; they will never enlarge the boundaries of their profession, never raise its standards higher; but what has been accomplished before them, they will copy with great skill, great facility and faultlessness, and any one able to do this is called a talented individual. There are any number of examples of men who manifested unmistakable evidences of talent on the most varied fields. I will only mention one, Urbino Baldi, the classical philologist, artist, mathematician, poet and physician, master of sixteen languages and professor of medicine at the University of Padua, who was thoroughly proficient in all these branches of learning. In former centuries such universally talented men were by no means uncommon, and we could train up as many of them as we choose at the present time, if the amount of knowledge to be acquired had not increased so enormously since then. It now requires a much longer time to do over again all that has been accomplished before. It is now a question of years instead of mental capacity. If men could live to be two hundred years old then, today as well as at the time of the Renaissance, one single individual might perfect himself in a number of different accomplishments and professions, until he had completely mastered them, and attained the proficiency in each separate specialty which would render him a talented expert in it.

But what am I to say now in regard to what is called

the expressed inclination for any special calling? One child from its earliest years wants to be a soldier, another a musician, or a scientist, or a mechanic. This certainly signifies that there is something in the child which other children do not possess, or at least not in the same proportion. Of course; so every one says. But my opinion is that all these instances of a child's assumed preference for a certain calling, are founded upon inexact observation. Generally speaking, the child's preference is attracted to a certain calling by some external circumstance, by the example of those around him, by the conversation carried on in his presence, by books which have fallen accidentally into his hands, or by plays that he has seen, and where there is an utter indifference to all callings, a very slight impulse is all that is required to attract the attention to one more than to the others. And in the limited number of cases to which this explanation does not apply, the so-called expressed preference for a certain calling is nothing of the kind, but merely an unexpressed aversion to other callings, based upon the realization of one's incapability for certain forms of activity, which again is the result of an imperfect development of certain nerve centres. This branch of the subject, however, trenches upon the sphere of disease, which includes those individuals, who in some point or other fall below the standard type; my assertion however, that talent is merely development by means of ample practice, applies to none but perfectly and regularly formed individuals of the normal type. Let us examine into the matter closely and we will find, that every time, when a young fellow runs away from the high school or the desk in the counting house, to become an artist or a soldier, he did not act thus from an irresistible yearning for the artistic or military profession—as he may imagine afterwards—but from a hatred of mathematics or of the

strict discipline of a business house, and with the hazy idea that the other career would prove easier and pleasanter than the one originally entered upon. This changeable individual does not possess anything beyond what others possess, he has no decided talent for art or arms, but he possesses something less than others: the capacity to endure the exertion of regular study or the mercantile discipline.

From what has just been said, the question as to the hereditary character of talent is already answered. As I do not believe talent to be anything specifically prominent in the organism, neither can I believe in its hereditary character. What is claimed to have been proved by experience in regard to this can not affect my views in the slightest, any more than does Galton's famous book, whose title, "Hereditary Genius," is a remarkably inappropriate use of the term. The fact frequently observed that a family produces a succession of so-called men of talent in one and the same direction, is not the slightest proof. What is more natural than that the child should be early influenced to give a certain direction to his thought by the example of father or uncle, etc.? The physician's son grows up surrounded by ideas of a medical and scientific nature; he is obliged to imbibe these ideas, if he is not hopelessly obtuse; they will impel him to select his father's profession, or one related to it, and if he is a normal human being, he will undoubtedly become proficient in the chosen profession, that is, he will become a man of talent. Did he therefore inherit a certain talent from his father? No. His ability to perfect himself in all the forms of human activity was only directed by his father's example to the acquirement of the paternal form of activity. The same boy, as the son of a general, would have become a man of military talent, or as the son

of a painter, he would have become a talented artist—in any case, a respectable mediocrity, but hardly attaining to more than this. The existence of several men talented in the same direction, in one family, far from demonstrating that talent is hereditary, is an exact proof of the contrary. It proves that a normally developed child can attain to the rank of a talented man in any career suggested to it by family traditions, by the mere force of example, without any necessity for a special organic tendency. There is one crucial test which would solve the problem once for all, but so far as I know, it has never been made. If some child, picked up in the street, brought up in an orphan asylum, with an education that did not make any calling especially prominent, should select a certain calling from a decided preference for it, and attain in it a reasonable if not exceptional measure of success, and afterwards discover the secret of his birth, and find that he was descended from a family which had already given evidence of the possession of talents in the same calling; if this test were to be repeated sufficiently often to exclude the operation of chance, then and not until then would it be demonstrated beyond a doubt that a certain talent is hereditary. But I repeat that I am not aware of any such test having been made up to the present time, and I doubt very much whether it ever will be made.

The circumstances are entirely different in the case of genius. Genius is not a synonymous term for the proficiency attained by ample practice. It is not a normal type exceptionally well developed, as the result of favorable conditions. Genius is an exceptional organization, differing from the normal organization. It is founded upon the special development of some one nerve centre, or sometimes possibly of more than one, or even of all the centres. The genius therefore performs all actions controlled by his

unusually developed centres, in an exceptionally perfect manner, far more perfectly than persons of the average type, even though they had cultivated these same centres to the utmost limit of perfection attainable by them. From a strictly physiological point of view, every instance in which any centre or even any tissue is developed to an exceptional degree, largely surpassing the average standard, ought to be properly described as genius. An extremely robust man, able to perform continually the severest labor, exposed to all the inclemencies of the weather, deprived of sleep, with insufficient food and clothing, and yet with it all, not impairing his health, such a man might be called a genius in life-force, as his lowest centres, those which perform the simplest tasks in the organism, the most secret mechanical and chemical processes in the living cell, must be exceptionally perfect in him. Milo of Croton was in this sense a muscular genius. The muscular tissue had attained a degree of development in him beyond that of any other human being known to the ancients. He was thus able to do things which had never been done before him, which did not seem possible to the average man, and in fact, were not possible. He wrenched trees asunder with his hands. This was a way of splitting them which had never occurred to any one before, and in which no one could imitate him, no matter how much he practiced. The utmost he could do was to attempt it on much smaller and weaker trees. There must certainly have been talented muscles which succeeded by persevering practice, in accomplishing on young saplings the feat that the muscular genius alone was able to accomplish on full grown trees without precedent and practice at the first attempt. There might be a man with such a perfect sense of hearing that, as he strolled along the street, he could distinguish what was said in the innermost rooms of the

houses, and even what was whispered. He would be a hearing genius. Without any trouble and as a matter of course, he would learn things and discover secrets of which the average man could not even conceive a suspicion. But such a form of perfection is not called genius, because it is not exclusively human. All living beings have the lowest centres controlling the vital processes, and if we should call the robust man mentioned above a genius, a frog that had remained alive in the heart of a stone for untold centuries, or a cat that had survived six weeks without food, imprisoned in some pipe among the ruins of a conflagration, would have a right to the same title. In the same way the muscular development of Milo of Croton would only cause him to rank with some especially strong elephant, or at most, with some exceptional flea that could jump much farther than any of his companion fleas, and a hearing genius does not surpass the animals among whom the different senses are developed to a perfection incomprehensible to us, such as sight in the day-birds of prey, and scent in the dog. Some animals have certain faculties that presuppose a nerve centre peculiar to them alone, and absent in man. The gymnotus eel is able to give electric shocks; the carrier pigeon can find its way home again across an entire continent; certain carnivorous wasps have such an exact knowledge of the anatomy of articulates that they pierce with their stings, which are guided with infallible certainty, all the nerve ganglia in the rings of a caterpillar's body, with the exception of the ganglia in the head, so that the caterpillar is completely paralyzed, but yet does not die, and the living body serves the wasps' brood for food, but can not injure them by any movement in the narrow nest. All these faculties are wanting in man. He will probably never acquire them because he does not need them. He has far

more than their equivalent in his higher, more comprehensive faculty of reason. He constructs for himself more powerful sources of electricity than those possessed by the gymnotus. With the compass and map he finds his way just as surely as the carrier pigeon. He studies anatomy until he is even more proficient in it than the wasp. But still it is possible to imagine a human being born as a freak of nature, that possessed the electric organ of the gymnotus, or the carrier pigeon's organ of locality, or the organ that replaces in the wasp the text books of anatomy and physiology, or an organ which might enable him to perceive the movements occurring in the brain centres of others, as we can now perceive with our eyes and ears the movements of another kind: that is, to read the thoughts of others. A human being thus endowed would accomplish things that we could not help considering marvellous. He would be credited with supernatural powers by all but the most advanced minds. But he would hardly be called a genius. We have to restrict this term to those beings who have developed to an exceptional extent—not some sub or superhuman centre—but some one of those which belong solely and exclusively to the human race, one of those highest centres possessed by man alone in its most perfect form.

This limitation of its meaning precludes the possibility of that misuse of the word to which even those most careful in their language are often liable. I regret the necessity of introducing names, but I am afraid I can not dispense with them as illustrations to make this argument perfectly clear. We call a Liszt, a Makart, a Dawison, a genius. This is no more appropriate than if we were to call some especially muscular man, like the example above, a genius. In all these three cases the whole matter is merely the exceptional state of perfection to which certain

of the very lowest centres have attained. To demonstrate this we must analyze the apparently very complex phenomena of a pianist, painter and tragedian, and determine their simple ultimate factors.

Let us examine first the pianist's playing. It is produced by certain motions of the fingers, hands and arms, (we can omit the comparatively unessential motions of the feet), and by an impulse which causes these motions to be more or less violent, slower or faster, more even or more irregular. There is thus a descending series of organs to be taken into consideration: first, a nerve centre which gives the impulse for motions of various degrees of intensity and of various kinds, changing with extraordinary rapidity; secondly, nerves which are sensitive enough to transmit this impulse with the greatest possible velocity and accuracy, so that it will not undergo the slightest change in the degree of its intensity nor in its special character; and finally, the muscles of the upper limbs, which maintain their relations to each other with such precision that their movements are always accurately proportioned to the impulse received. We know that the labor of combining the movements of the muscles for a given purpose—co-ordination—is performed by certain centres, and we have a right to assume that the musical impulses are evolved in some sensory centre which is incited to automatic action by impressions imparted chiefly by the sense of hearing, but also by some other senses and brain centres as well, if these impressions appear always or frequently in conjunction with those of the sense of hearing. These non-acoustic impressions, which are usually combined with the acoustic, are principally amatory. Primitive man, like a long list of animals at the present day, probably accompanied his love-making with noise, (rhythmical cries, singing, etc.), and hence our brain centres have retained an organic association of the

activity of the centre of propagation with the one of the sensation of rhythmical sound. When one of these centres is excited to action, the other is affected sympathetically with it. Love thus arouses musical impulses, and the operation of the centre controlling the musical impulses arouses the centres of love (propagation). But this is far from being the only association of the kind. Every scene, every event in the exterior world includes elements that excite not one sense alone, but all the senses to action. Let us take, for instance, a sunny morning in spring. The sense to which this scene principally appeals is of course the sense of sight, as the most essential element in it is the sunshine and its peculiar effect upon the landscape. But besides this, the sense of smell receives the impression of the odors of the grasses and flowers, of the ascending vapors and the ozone in the air, the sense of feeling, the impression of coolness and a certain degree of moisture, and the sense of hearing, of the voices of certain animals and birds and the rustling of the foliage, etc. Each separate complex scene or phenomenon consists thus of impressions upon several or upon all of the senses; these various impressions, some of which are stronger and others weaker, are retained by the memory as a whole, and a certain one of these impressions upon any one single sense arouses in the other centres of perception and sensation the impressions usually received in conjunction with it. In this way the characteristic fragrance of a summer morning in the country or in a forest, will recall the whole scene of the summer morning to our memory, and with it all the rest of the impressions upon the senses which combined to form the *ensemble*; thus the sensation of coolness and freshness, the impression on the hearing of the cock's crowing, the lark's song, the dog's barking and the ringing of the bells, etc. Any excitation of any one sense, even very slight, can thus excite, with

the rest, the centre of the sensation of musical sounds to activity, the character of this activity varying with the nature of the excitation that produced it. This sympathetic activity of the different centres proceeds entirely automatically and entirely independent of the consciousness. The consciousness is not even able to distinguish what sensation it is which excites another centre to action, because it is not accustomed to analyze and determine in the phenomena observed how much each sense has contributed to produce the general effect, but usually considers some one sensation, because it is the most intense, the only essential one, and entirely neglects all the rest, as they are weaker and subordinate. Not to digress too far from the real subject of my argument, I will only introduce one illustration. An impression upon the sense of smell, the odor of the oil, paints, or of the varnish, forms one of the factors in the effect produced by an oil painting; but it is so feeble and of course so unessential in comparison with the impression upon the sense of sight, that we are scarcely aware of it, and overlook it entirely, so that we never consider that the centre of smell has anything whatever to do with the composition of the idea, "oil-painting," on our consciousness. Nevertheless, the mere impression upon the centre of the sense of smell of an odor similar to that of oil paints or varnish, is sufficient to excite to action all the other centres that usually combine with it to produce the idea, "oil-painting"; and thus the idea of a painting will occur suddenly to our consciousness without our being able to explain to ourselves how this image happened to be recalled to our memory. This is one of the most important manifestations of the association of ideas; it explains the moods which creep over us we know not how; it is also a plausible explanation of most of our dreams, that when the centre of consciousness is working feebly or not



at all, the sensation centres receive even very slight impressions from without, and automatically work them into the ideas of which they form a constituent part. To be a fine performer on the piano forte an individual has therefore to fulfill the following conditions: he must possess a very sensitive nervous system, that is, one exceptionally perfect in transmitting impulses, his centre of sound sensations must be readily incited to impart impulses by external impressions, not merely those on his sense of hearing, but on all his other senses, according to the mechanism explained above, and his centre of co-ordination must be especially perfect, so that it can combine the most delicate, accurate and complicated movements of the muscles of the hands in the most rapid changes.

The predominance of a certain centre determines to what class the pianist belongs. If his centre of co-ordination is the one principally developed, his *technique* will be brilliant, and he will overcome all difficulties with great ease, but leave the impression of coldness and a certain lack of feeling. If, on the contrary, the centre of sound sensations as well as that of co-ordination is exceptionally developed, his playing will not only be fine in its *technique*, but it will reflect also his varying and manifold sensations, and thus produce an animated and soulful effect. An exceedingly highly developed centre of sound sensations will be able to impart more powerful impulses than the usual, familiar ones, and to combine them in original, novel ways. Such a centre constitutes the psycho-physical foundation of a genius in musical composition. It is the special characteristic of a Beethoven. A centre of sound sensations developed to this extent, combined with an equally well developed centre of co-ordination, produces an individual who is not only a genius as a composer, but also notable as a performer, like a Mozart for

instance. If the former centre is exceptionally complete, while yet the latter centre surpasses it, the result is one of those composers whose music never produces its full effect unless it is played by himself, or strictly according to his special style, that is, according to the peculiarities of his centre of co-ordination. Chopin is an example of this latter class. An exceedingly well developed centre of co-ordination in combination with a centre of sound sensations somewhat but not much above the average, produces a wonderful performer, grand in the rendering of the music of others, but almost below mediocrity in composition, like Liszt, who is called a genius by a mistaken application of the term. His genius would be due to an exceptional development of the centre of co-ordination, as our analysis has just shown, and be thus a co-ordinating genius. But the centre of co-ordination is one of the lower centres, and is not exclusively human. Its exceptional development gives the possessor of it no right to the appellation of a genius, which must be reserved for the perfection of the exclusively human centres. Some animals display an especially fine power of co-ordination, such as the monkeys, whose feats in climbing and balancing not many human beings are able to imitate. Even in man, any especial proficiency in comparatively low forms of activity, presupposes very perfect centres of co-ordination. For instance, it requires a very highly developed centre of co-ordination in the lower limbs to be a fine skater. The same state of perfection combined with a well developed centre of sound sensations produces a surpassing dancer; on the other hand, combined with well developed centres of will—that most essential element of courage, and of judgment—instead of a remarkable centre of sound sensations, it forms the psycho-physical groundwork of an exceptionally fine horseman. A high development of the

centre of co-ordination in the upper limbs is the cause of a long list of faculties, varying with the higher centres, as the latter are developed and communicate their impulses to the co-ordinating centre. The combination of the centre of co-ordination with that of sound sensations will produce, as we have seen, a finished pianist; the former centre combined with the centres of will and of judgment, will produce an excellent fencer. A curious parallelism exists thus between the dancer and the pianist on one hand, and between the horseman and the fencer on the other. Hence to speak of a pianist as a genius is no more appropriate than to apply the term to a dancer, a horseman or a fencer. This topic is of vast extent and interest. An adequate discussion of it would fill volumes instead of chapters. We could combine almost infinitely the different centres, and see what especial skill would result from these combinations. But this must be left to the reader, who may be stimulated to attempt it by the preceding examples. One other question I will touch upon, without discussing it in detail. What would become of a man with the organic qualifications of a Liszt, if he had been born before the piano or any other instrument that could be made to produce sounds by the motion of the hands, had been invented? In that case there would not be the characteristic combination of the two centres, of which one is exceptionally and the other fairly developed. Each centre would work for itself alone, and the result would be that instead of a Liszt, there would be an individual distinguished by great proficiency in all manual tasks—such as tying or braiding knots; he might even prove an expert sleight of hand performer—with musical inclinations which might manifest themselves merely as a general love of song, or in attempts to sing or whistle. Even the activity of the noblest of the centres that com-

bine to form the pianist, whose most advanced state of development actually does produce a genius, like Beethoven, that is, the centre of sound sensations, is still nothing but a purely automatic, purely emotional, centre, and falls below every cogitational form of activity. The work of the less noble centre of co-ordination is not altogether an intellectual, nor exclusively human form of activity, but is found in many organisms outside of the human race and even in an extreme state of perfection.

Let us now apply the same method of analysis to the artist, to a Makart, for example. A work of art, a painting, is also something very complicated, whose simple elements play the most varied parts in the production of the general effect. What we have to consider in a painting is first, the effect of coloring, next, the form, and lastly, the meaning conveyed to the mind, called either the subject or the composition. Our centre of light-sensations is so constituted that it experiences the impressions of certain colors and combinations of colors as agreeable, and those of others as disagreeable. I am not able to explain with certainty the cause of these differences in these subjective sensations. Helmholtz and Bruecke have published the results of their glorious investigations on this subject, and have made it seem, at the least, very probable that the subjective effect of the combination of certain colors as well as of certain tones, depends upon the proportion which the number, extent and form of the vibrations or waves bear to each other, these vibrations being probably the cause of the changes in our organs of sense which we recognize as colors or tones. And thus, according to these great scientists, all our agreeable and disagreeable sensations in regard to colors and tones, have their origin in the unconscious determination of the simple or complex arithmetical and geometrical proportions between the movements of the

ether or matter. But be this as it may, it is enough for our purpose that we know by experience that there are agreeable and disagreeable colors and combinations of colors. An especially finely developed centre of light-sensations will not only enable a man to perceive the impressions of colors with especial intensity, and thus to take especial delight in certain combinations of colors, and to be especially repelled by discordant ones, but it also enables him to discover the colors and the combinations of colors that will produce an extraordinarily agreeable effect. The centre to which we are now referring is one of the lower cerebral centres, like all the centres of sense. It is by no means an essential attribute of humanity, but is distributed throughout the animal kingdom to its very lowest orders. We surely have a right to assume that many kinds of birds, and even butterflies, beetles and molluscs possess it, as the brilliant coloring of these creatures would be otherwise perfectly incomprehensible; but since Darwin, it has been generally conceded that the beautiful coloring of animals is the result of natural selection, and is thus due to the fact that the individual adorned with it was singled out from preference by the individuals of the opposite sex, which would be inconceivable if it did not presuppose in these individuals a sense to perceive the effect of coloring, a delight in beautiful colors. As regards his color-sense alone, that is, his delight in beautiful colors, man is no more than on a par with the magpie, the peacock's eye butterfly, and the sea anemone. The cultivation of the centre of light sensations is a practice in art, and is sufficient to enable him to produce works of art with agreeably diversified and brilliant-hued flat surfaces, such as carpets, tapestry and frescoes, with harmonious blendings of colors. In fact, those paintings that owe their origin to the impulse of this centre will probably produce the same

effect as a handsome oriental rug, although as works of art they rank much lower, not being as perfect in their way as the rug.

The second element in the effect produced by a painting is the form. The picture is an effort to deceive by means of the external appearance of certain objects. The means employed by the artist to accomplish this deception are drawing and coloring. (Of course I only make this distinction for the sake of convenience, as at bottom, what we call drawing is only one form of the effect of color; drawing deceives us in regard to things also, by the use of different degrees of light in opposition, that is, colors, usually black and white.) In reality we see things according to their situation in space, according to their distance from us and from each other, and in form, size and lights, as they are situated above or beneath us or to one side. The same ball looks large to us when it is near, it looks small when it is at a distance from us; sometimes, if it catches the light properly, we see a full half of it, in other cases merely a larger or smaller portion of it; we do not become directly cognizant of the fact that it is round; we only know that the rounded side lying nearest us catches the light in a different way, and shows an entirely different tint from the parts more remote. Notwithstanding the fact that the reflection of this ball upon the retina varies with every change in its position, we trace it to one and the same cause or object, that is, we recognize that it is the same ball, whether we see it large, close at hand, or small, in the distance, or only a half of it, or a still smaller portion, or lighted from in front, lightest in the centre and shading off to the edge of the circular reflection, or, lighted from the rear, darkest at the centre and growing lighter towards the edges. What we have learned to understand from these reflections or images upon the retina, is the

knowledge obtained by the co-operation of the other senses and of the judgment. In reality we see nothing but flat images, all in the same plane, the different parts of which have different sizes, different colors and different degrees of brightness. That these differences in coloring, size and lighting correspond with differences in the distance, that the objects which appear to be all in the same plane, are in reality in different planes—we have learned by experience. To know that a flat image of a circular shape whose centre catches the light differently from the edges, represents a ball, we must at some time have felt of the object thus reflected, we must remember the motions which our hand had to make to enclose the surface of this object; the sense of feeling has to come to the assistance of the sense of sight and complete its work. In the same way, in order to know that a house appearing to us small and indistinct, is in fact large, but far away, we must at some time have traversed the distance between us and some such small and indistinct object, and remember the motions that our limbs were obliged to make before the small and indistinct object became large and clearly defined. The artist copies objects, not as they really are, but as they are habitually reflected upon the retina, that is, in their apparent relations as to size, color and light, and if he portrays them accurately, we act according to acquired habit, and interpret this plane painting as we are accustomed to interpret the plane images on our retina, that is, we see in some little dot, painted with indistinct outlines, in spite of its small size, a large house, in spite of the fact that it is there on the canvas, only a few feet from our eyes, a house in the distance, and in spite of the fact that it is there upon the same expanse of canvas with many other objects, a house situated in a far more distant plane than the trees or other objects in the foreground. The work of interpret-

ing is not carried on in the eye, of course, but in the higher centres, the centres of memory and judgment; it is only commenced by the impression on the sight. To produce an image in our consciousness the painter has therefore only to bring some single characteristic of the object in question before our eyes, the outline, for instance, or the contrast of light and shade produced by it. Memory automatically adds to this all the remaining characteristics, because it is accustomed to see this characteristic always appear in conjunction with the rest. Thus we often believe we see things with our eyes in a painting which in reality are not at all upon the canvas, which therefore our eye can not see at all, but which are added by our brain centres, which complete automatically the idea merely suggested by the artist in his painting. I will illustrate this by merely one example. We think we see in a painting the single hairs in a man's beard, the single leaves on a tree. But the artist has not painted either hairs or leaves, but merely a certain effect of the light on an irregular brownish or greenish surface; but as we have often observed this light effect on beards and foliage, and have learned by experience that it presupposes hairs or leaves, our memory supplies the hairs or leaves where they are lacking in the picture, and in our brain centres we see something that our eyes do not see at all. The art of the painter consists therefore in finding and imitating the special characteristics of objects just as they are reflected upon our retina in reality. He can represent all the characteristics or only a few of the more essential ones. The outline alone reminds us of a single characteristic—the boundaries of the object, and thus requires extensive assistance from the brain centres, if it alone is to suggest the idea of the object. The perspective outline gives us at once an idea of the relations existing between the objects in space, as we

find again in it the apparent differences in size that we observe in reality. A shaded drawing supplies another characteristic to the objects, the differences in the effects of light and shade, which in reality assists us in estimating the size and distance, and thus the construction of the object. And color, finally, supplies the last characteristic which the sense of sight is capable of perceiving, and a painting correct in outline, perspective, effects of light and shade and coloring, produces exactly the same impression upon the eye as the objects themselves, so that it is impossible for the higher centres to distinguish between the two impressions, and to refrain from recognizing the objects themselves in the painted imitation of them, which has all of their optical characteristics. The work of the artist is a very close analysis of his impressions, in which he must distinguish between the workings of his higher centres and of his sense of sight. To retain the illustration cited above: when he sees foliage, he has to dissect this sight and come to the conclusion that he does not see leaves with his eyes, but only a peculiar effect of light and shade on an irregular greenish surface, which his memory has to resolve first into the images of single leaves; he must therefore represent in his painting not the leaves, which he imagines he sees, and does not really see, but the peculiar effect of light and shade on the irregular green surface, which is all that his eye perceives in fact. The uninitiated have not the least idea, what a difference there is between what our eye really sees and what we imagine we see, when we are receiving any given impression upon the sense of sight. But the painter has to ignore the idea completely, and confine himself exclusively to the impression that produced it. This analysis proceeds unconsciously. It is founded on a faculty possessed by the centres of light-sensations to innervate the muscles

employed in the acts of drawing and painting, without any intervention on the part of the higher centres of memory and judgment. The hand can thus draw and paint only what the centre of light-sensations is actually perceiving, that is, sees, and not what the higher centres add to complete or alter it. This direct connection between the centres of light-sensations and those of motion, which is the organic foundation of the special artistic talent, does not entirely exclude the intervention of the higher centres however. These latter select from among the constituent parts of the impression received by the centre of light-sensations from some object, those few that are most essential, which they retain, and imitate by muscular movements; while those that are unessential are entirely or partially neglected. The feeling, in many cases unconscious, that a certain characteristic, an outline, or an effect of light, ought to produce the idea of one special object rather than another characteristic, is what raises the work of the artist from a mere activity of the senses and muscles to be an intellectual activity, and causes a painting to be something different from a photograph. But after all, this activity is yet of a low standard; it proceeds but to a very limited extent from the highest centres and does not appeal to the highest centres. Its result is a work of art the sole merit of which is truth; but an uninteresting, in no way stimulating truth. An individual who possesses the gift of portraying the impressions received by his organ of sight alone, without any admixture of what memory and judgment have supplied to complete them, will be able to draw still life exceedingly well, and if he has a sense for colors, also to paint. He will become one of the classics in so far as his treatment of asparagus and oysters is concerned, and become famous in the portrayal of kettles and glassware. But beyond this he will not attain success.



And now we come to the third element to be taken into consideration in studying a painting, to its intellectual import, that is, to what it represents, its substance or idea. The same talent of analysis that enables the painter to separate the really optical appearance of objects from their psychical image, and to seize and reproduce the most essential elements of this appearance, in an advanced state of cultivation makes it possible for him to determine and portray the really optical appearance of events. We are alike unable to see the roundness of a ball in actual reality, as we are to see a movement, or a state of emotion. In the former case, what we actually see is a certain characteristic play of light on a flat circular surface, in the latter, a succession of images or a certain position of the muscles of the face, the limbs and the body. But experience has demonstrated to us that the flat circular surface when it has a certain effect of light upon it, represents a ball, and in the same way we know by experience that a succession of identical images, appearing in turn upon our retina, and requiring movements of the muscles of our eyes and necks to continue to see them distinctly, signify movement on the part of the object seen, and that a frowning brow and clenched fist indicate anger. The painter now seizes the optical characteristic which is peculiar to anger, joy or sorrow, for instance, and as he faithfully reproduces it, it arouses in our minds the idea that he has actually portrayed on his canvas the corresponding frame of mind which, in reality, it is impossible to portray. The limitations of the painter's art can be readily deduced from the foregoing. In the first place his art is purely historical; that is, it can only reproduce events identical or similar to those we have already seen, with whose optical characteristics we are already familiar. If the painter were to represent events of which we know absolutely nothing, we

would be looking upon an optical appearance which we would not know how to interpret; the retina would receive impressions, but the memory and the judgment would not be able to add anything to complete them, and the painting would merely produce an impression upon the sense of sight without evolving any idea, which the painter, with the means at his command in his art, is not able to give, but only to suggest, and which our own mind has to construct upon the foundation of the suggestion supplied by the painter. In the next place the painter's art is not able to represent any very specific mental processes, but must restrict itself to broad, comprehensive generalities. It is beyond the power of this art to express the special thought: "I am dissatisfied with the way I have spent the last ten years, and particularly with the career I have chosen;" at best it is able to express in general terms the sentiment: "I am dissatisfied." Why? Because dissatisfaction in general has a visible characteristic, namely, a certain expression and pose, while dissatisfaction with one's career or with a certain portion of one's life, has no special optical characteristic, peculiar to it alone, to distinguish it from dissatisfaction in general. These limitations to the art of painting cause it to be a purely emotional and not at all a cogitational art. All that is entirely novel, all that is purely personal, all that is not associated with familiar ideas, is beyond its reach. But the genius of the painter must consist in the first place, in his ability to discover in even very complex phenomena, certain optical characteristics peculiar to them and to them alone, which yet would escape all but the closest and most searching analysis, in the second place, in his reproducing with extreme fidelity to nature, the characteristics which he has perceived, and, in the third place, in his selecting momentous events as the subject of his representation. The mere possession of

talent, and of course, the lack of it, would never enable a painter to compete with the genius, at least on the first and second points, as it would be beyond his power to analyze appearances into their essential optical characteristics and portray these characteristics with fidelity; all that such a painter can do is to imitate the artistic analysis of the appearances of objects already provided him by the genius.

We have thus the simple elements which combined, produce a genius in painting: the sense of color, the ability to distinguish between what is really seen by the eye, and what is added to this by the mind to complete it, and lastly, the power of tracing compound events to the optical characteristics peculiar to them alone, which at once afford a clue to their meaning. The two former faculties are low and automatic; the possession of them does not entitle one in the least to the appellation of "genius." But the third faculty presupposes the intervention of certain higher centres and requires a new and independent form of activity—the discovery of the distinguishing optical characteristics, which had never previously been recognized as such. It is not necessary for all these faculties to be combined nor to be developed all to the same degree. As one or the other predominates, the special features of the painter's genius alters with it. Skill in analysis, fidelity to nature and a sense of color, combined in about equal perfection, produce a Raphael. This combination enables one to create a Sistine Madonna, which portrays the essential characteristics of that sight which arouses the most powerful emotions in man, (much less in woman, and not at all in the immature individual), that is, the sight of woman, beautiful and pure, which appeals to his sex centres, and of the deity, which appeals to his inherited sense of mysticism; while at the same time the painting produces

the impression of truth in drawing and coloring, and causes agreeable sensations by the harmony of its colors. A Murillo and a Velasquez display the same harmony in their coloring, with a greater optical fidelity to nature, but they do not arouse the same emotions, because the substance of their most important works does not appeal to two such powerful sentiments as love and mysticism, but either to the latter alone or to mere curiosity, to the more or less superficial interest in all human events. (I am not referring to Murillo's Madonnas, as I do not consider them his best creations, but to his grand epic pictures in the *Caridad*.) Exquisite coloring, a moderate amount of fidelity to nature, and the association, not of deep-seated human, but of patriotic and national emotions, produce a Paolo Veronese. Fidelity to nature and a subject of importance, without any special charm in coloring, produce a Cornelius or Feuerbach. If the artist's highest gift is lacking, that is, the power of portraying objects or important events, in their essential optical characteristics, while at the same time, optical truth and sense for color are well developed, then we have a Leibl, a Meissonier, a Hondelcoeter, artists producing works that are fascinating and charming, but hardly capable of arousing any emotions of importance. Such artists hardly deserve the term genius. A great predominance of the faculty of seeing and reproducing with optical fidelity to nature, with the highest powers of analysis and a sense of color only partially developed or not developed at all, results in a Courbet, whose paintings are neither agreeable to the sense of color, nor significant in their subject, but optically so true that they produce exactly the same impressions upon us as the objects in reality. This brings us almost to photography, with the single slight difference that photography impartially reproduces all the optical characteristics—their color-

ing excepted—while in a Courbet a higher centre detains the image on its unconscious journey from the retina to the painting hand, suppresses some unessential element, and allows only the specially characteristic ones to pass. And lastly, a sense of color alone produces a Makart, who understands the art of combining agreeable colors, like that Australian harlequin bird in its artificial bower, but does not see nor reproduce the objects with optical fidelity to nature, nor have the power of representing significant events or sights by their essential visible characteristics, so that others can understand them and receive the emotions from them, which the events or sights themselves would be able to arouse. It would therefore not be allowable to call a Makart a genius, unless this title were applied also to the bird mentioned above.

We can dispose of the actor much more rapidly. His peculiar faculty consists in the development—obtained by special cultivation—of those organic attributes which are the most universal, not only among human beings but also among the higher animals, viz., the faculty of imitation, and the alternate operation of ideas upon movements and of movements upon ideas. There is no need to waste any words upon the faculty of mimicry. Every one knows what it is, and it will be the task of one of the ensuing chapters to show upon what organic grounds it is founded. The alternate operation of ideas and movements, on the contrary, may require a few words of explanation. All impressions from without which are transmitted by the sensory nerves to the centres in the spinal cord or brain, arouse a certain activity in these centres, which is apprehended by our senses as an impulse to movement. (It may be just mentioned here, without entering into details, that even when the impression from without apparently incites merely to conscious mental activity—cogitation—or

to the unconscious, automatic activity of the higher centres—emotion—and yet not to any perceptible movement, an impulse to movement, even if only very feeble, is imparted by it, which especially sensitive persons, as the well-known "mind readers," are just able as yet to perceive in some cases.) Let us take a coarse and therefore easily understood example. The sensory nerves in the point of a finger which heedlessly has come too near a hot stove lid, will transmit an impression to the spinal cord and the brain which will be perceived in the lower centres in the spinal cord as indefinite danger, and more definitely in the higher centre in the brain as pain, that is, as the pain of a burn. The centre in the spinal cord replies to this intimation by an impulse imparted to the muscles of the arm, which produces a rapid withdrawal of the hand, and the brain centre, by an impulse imparted to the muscles of the face, lungs and throat, which is followed by a painful contortion of the features, and the utterance of a cry. The sensation or conception of the pain of a burn has thus produced certain impulses to movement. Vice versa, the same movements,—that is, the abrupt withdrawal of the hand, the characteristic contortion of the facial muscles, and the utterance of a cry produced by violently contracting the intercostal muscles and the diaphragm, while the muscles of the larynx are held in a position to correspond—will arouse in the higher brain centres the sensation or idea of a sudden pain in the hand. Any one can try the following experiment: let him first determine in what movements the moral condition of profound sorrow attains to visible expression with him—be it the head bowed down, a characteristic expression, a certain tone of the voice, sobs, etc.—let him begin now to imitate accurately all these muscular movements and very soon he will notice, perhaps to his astonishment, that his frame of mind has

become a profoundly sorrowful one. He will then even perceive that even those phenomena attendant upon this emotional state, which can not be produced by an effort of the will, as they are not caused by the movements of the transverse muscles, such as the shedding of tears, gloomy associations of ideas, pictures of the imagination, etc., will make their appearance. We must constantly bear in mind that the nerves which run from the extremities of the body to the centres, these centres and the nerves which run from them to other centres or to muscles—form one single apparatus, in which the connection of the separate parts has become organic and automatic, and that the apparatus goes through the whole round of its automatic work, no matter at what point it is set in motion, nor whether it is started in the correct direction or reversed—whether from ideas to movements or from movements to ideas. This is the mechanism with which the actor performs his special work; it enables him to make the given moral conditions, viz., those of the person he is representing, perceptible to the senses. He can perform this task in two ways, with and without the aid of the consciousness. In the former case he can observe accurately and keenly, the muscular movements, that is, the gestures, mien, fluctuations in the voice, etc., by which persons organized in certain ways, the tranquil, the nervous, the well-bred, the vulgar, etc., are in the habit of visibly and audibly manifesting certain given frames of mind, such as cheerfulness, distrust, reveries, etc., and then endeavor to imitate these combinations of movements by sheer will power. Or he can imagine the mental state he wishes to portray, and assist this conception by a few of the movements by which it is usually followed, and then leave to these the task of arousing the conception to increased vitality by their reflex operation upon it, until it proceeds unconsciously and automatically to impart all the impulses to movement

which pertain to its sphere, the voluntary as well as the involuntary ones. The former method is the more difficult and it is always extremely uncertain. It requires the same faculty of close observation and analysis of appearances that we have seen to be necessary to the artist. The actor imitating with the aid of the consciousness, must have studied the frame of mind he wishes to represent; not a single one of its perceptible forms of expression must have escaped him, and he can not restrict himself, like the painter, to the optical characteristics of the phenomenon, but must also take the phonetic into account. If he can not find in his memory the type he wishes to imitate, or if he has not studied it sufficiently closely, his imitation of it will be awkward and incomplete, and will be unable to impress any one as true to nature. The second method, on the other hand, is easy and certain. As the same mental conditions are manifested in the same way by all human beings, with very slight individual variations, and as the actor is also a human being, as one might say, he has only to let it quietly take its own course, after he has once evolved the mental state he wishes to represent; the visible manifestations distinguishing it, all of them without exception, the voluntary as well as the involuntary ones, even tears, the expression of the eyes, etc., will make their appearance in turn without fail, and a perfect fidelity to human nature will be attained. The only thing needed to carry this method into execution is a very mobile and unsettled state of balance among the brain centres. The actor must not have any fixed dispositions, a powerful consciousness or an original personality. The cogitational activity of the highest centres must not predominate over their emotional activity, and neither prevent nor interfere with their automatic work. A distinguished actor must be like a gun whose trigger works with exceptional ease and

rapidity. As the slightest touch will discharge the gun, so the slightest external impression produces in the actor that mental condition he wishes to depict, which then automatically proceeds to make itself duly manifest. This, it is evident, can only be expected of a brain whose highest centres are unoccupied, as a general thing, that is, have no mental labor of their own to perform, and are consequently always ready to respond to any sense-impressions with the corresponding dispositions and conceptions. Where is there any room left for a genius here? The possession of cogitational talent of observation and of a conscious reproduction, only creates a second-rate actor. Those very actors who are the most distinguished, the truest to nature and the most effective, must be men of inferior mental capacity, with a vacant consciousness and a dwarfed personality, and their centres must be capable of being excited to automatic activity with an almost morbid facility. Is it not characteristic of this art that physical beauty and a finely modulated voice, which are among the lower organic forms of perfection, are two of the most essential requisites in the production of an effective delineator of mankind! The distinguished actor has thus very properly the psychological constitution of the child and the savage: the checking (inhibiting) activity of the centres of consciousness has with him no influence upon the automatic workings of the centres of movement. It is the task of education in our civilization to practice and strengthen this very inhibiting activity; we are trained not to allow our emotions to manifest themselves in movement impulses, in cries, facial contortions and gestures, and we realize this ideal in fact to such an extent as to entirely suppress the automatic workings of these centres, so that we avoid every or almost every perceptible outward manifestation of our emotions, and do not betray by any external indication what is

taking place in our consciousness. The actor who should attain to this ideal of education, would no longer be able to practice his art.

Thus as we have seen, it is a mistaken use of the word genius, to apply it to an instrumentalist, in music, a combiner of agreeable colors, in painting, and an actor. The exceptional development of such low centres as the centres of co-ordination or of light-sensation, or the exceptionally animated reciprocal action of movements and the mental conditions that usually produce them, do not give any more claim to the title of genius than an exceptionally perfect muscular development or an exceptionally far-seeing eye. Genius is founded exclusively on the exceptional perfection of the highest and therefore purely human brain centres, whose activity we recognize as the judgment and the will. The judgment and the will, these are finally the faculties whose combined operation raises the human being above the animal, and whose exceptional development raises the genius above the average man. By his judgment and will alone, and by nothing else, is the genius a genius. What is the judgment? It is an activity which independently evolves new ideas out of conceptions imparted to it by impressions on the senses or by some preceding activity on the part of the judgment. The matter manipulated by the judgment is supplied by the memory, which derives its contents from the impressions on the senses, and by the reason, which interprets these impressions on the senses. The laws, according to which the judgment works, form collectively what we call logic. Thus the impression on the senses is received by the centres of sensation, it is interpreted by the reason, retained by the memory and finally worked over by the judgment in accordance with settled laws, the laws of logic, into new conceptions which no longer depend on any direct



perception by the senses. An extremely simple illustration will make this clear even to those readers who have never heard of such a thing as the science of psychology. My senses, feeling and sight, informed me once when out of doors that water was falling upon me and that the sky was black. My reason combined these two impressions upon my senses and interpreted them into the idea: it is raining from the clouds. My memory retained these impressions and the interpretation of them. If I now see heavy clouds gathering and the other conditions (temperature, state of the barometer, direction of the wind, etc.,) which usually accompany rain, occur again, my judgment will produce from the conception of rainfalls in the past, supplied by the memory, a new conception,—the reason having determined the conditions of rainfalls on the basis of the logical law demonstrated by experience, viz., that the same causes under the same circumstances will produce the same effects: it is going to rain immediately, a conception that does not proceed from any sense-impression, as of course an event still in the future can not produce any impression upon the senses. That judgment also proceeds from the activity of some one organ, some brain centre, and can not be a phenomenon occurring outside of matter, as is assumed by Wundt—so great and profound a thinker in other respects—is proved by the fact that it becomes organic, that is, automatic, like every other form of activity of the brain and spinal cord centres, by frequent repetition in the individual and by inheritance in the race. To retain my simple illustration, we find that even very low classes of animals, even worms, are capable of forming a judgment, from the occurrence of certain phenomena, for instance, that it is going to rain, as they take the precautions usual among them when it is threatening rain, crawling away, boring into the ground, etc. But the more

perfect a centre of judgment the easier it is for it to form new conceptions out of the matter supplied to it by the senses, the memory and the reason, and the more remote will these conceptions be in time, space and nature, from the sense-impressions which supplied the first impulse towards their formation. What distinguishes it, therefore, from the less perfect centre of judgment is the fact that the latter does not wander far from its secure foundations—the sense-impressions and the memories—in the formation of its new conceptions, that is, judgments, while the former evolves a judgment out of the sense-impressions and memories with a marvellous audacity, and treats this fruit of its own labors as a production equal in value to the material provided by the senses, memory and reason, and deduces other judgments from it by the laws of logic; and this deduction of judgments from each other, this accumulation of new conceptions on the frequently very limited foundation of some sense-impression, it carries on freely and easily to limits that seem unattainable to the average man. We can illustrate these relations between the impression on the sense and the judgment by comparing the faculty of judgment in an average man to a pyramid, whose base is the sense-impression, while the judgment forms the pointed apex; the same faculty in a genius, however, to a pyramid in a reversed position, the point below representing the sense-impression, which spreads out into the vast square of judgment. Thus the possession of a powerful centre of judgment enables one to surmise the most complex relations between things, from a single impression, a glance, a sound; to foresee the future from the present, and often the far-distant future; to discover from a phenomenon the laws controlling it; to know beforehand the result of the operation of different phenomena upon each other, before even a chance for observation has been afford-

ed. Such a centre of judgment produces a knowledge of human nature, to use the popular term, a mastery of circumstances, the most confident guidance of self and of others, wisdom, sagacity and inventive powers. The judgment I have been defining thus far implies the acceptance of causality; by this I mean that it takes it for granted that every phenomenon has some cause, that the same causes under the same conditions produce the same effects, and that the extent of the cause is in exact proportion to the extent of the effect. Not unless this is assumed does the material supplied it by the memory become of value to the judgment, which then can form new conceptions out of the pictures held up to view by the memory, and draw conclusions from the past in regard to the future, from what is near, in regard to what is far away, and from what can be perceived by the senses, in regard to what lies beyond the immediate sphere of the senses. I can imagine, however, a centre of judgment so powerful that it would not require any material to be supplied by the memory, that is, it could dispense with causality altogether and would be able to transform the sense-impression at once into new conceptions, based upon the recognition of a new individual law in every new phenomenon—conceptions that would not be mere projections of pictures of the memory into the future, but conditions of the consciousness, individual in the fullest meaning of the word, and repeating nothing that was known before. However, I will not spin out this idea any further, but confine myself to the limits of contemporaneous humanity.

We mentioned that next to the judgment the will is the most essential element of genius. What is the will? In my reply to this radical question I have the audacity to differ not only from Kant, to whose surpassing greatness I bow in humility, but also from Ribot, whose keen pene-

tration and thoroughness as an investigator I acknowledge with pleasure. Kant explains the will as the commander, the law, and the obeyor all in one. This is a transcendental definition which is hardly more comprehensible and lucid than the theological explanation of the unity of the three natures in God. Ribot's definition, according to which the will is the reaction of the Ego upon the influences of the external world, is much too comprehensive and includes in fact the entire consciousness, which, as far as it is founded upon sense-impressions and depends upon sense-impressions for its very being and significance, (I will pass over the query as to whether we need accept *a priori* conceptions), is likewise nothing but a reaction of the Ego upon external influences. But a definition which leads inevitably to the assumption that the consciousness and the will are identical, can not be correct. Those persons who regard the universe from the standpoint of the natural sciences, must agree with my assertion: the will is the activity of a certain nerve-centre, whose sole function in the organism is to produce contractions in the muscles, or, in other words, to impart movement-impulses. Philosophically this definition of the will approaches that of Schopenhauer; as Schopenhauer calls what produces movement, the will, not only in organic but in inorganic objects as well, and as, in its ultimate analysis, every phenomenon is a movement or a resistance to some movement, and thus a passive movement, we might define the will as the essence of all phenomena and thus of the universe. I do not go so far as this. Notwithstanding the theoretical similarity or, if you like, even identity between the fall of a stone and the step of a man, we are justified in distinguishing between these two forms of movement in practice, and refusing to apply the same term to what produces the fall of the stone and what produces the step of the man.

We will thus call the cause of movement-impulses, will, in the organism alone, and consider the will as an attendant phenomenon of life alone. That it is possible to produce muscular contraction not merely by the will but by other agents, for example, a galvanic battery, is not an argument against the correctness of my definition, as, in the first place, it does not exclude the possibility that the same phenomenon may be produced by various causes, and, in the second place, it does not prove that the will itself is not a kind of electric phenomenon, as we speak of the "nerve-current," the "nerve-power" and the "nerve-fluid"—terms that owe their origin to the idea that the will-centre is a kind of electric battery, and the movement-impulse transmitted to the muscles, a kind of electric current. It may perhaps be urged in objection that the will can also produce phenomena which can not strictly be called muscular movements; for instance, it is undeniable that we make an effort of the will to recall a thing to our memory; but memory is not a muscular activity. To this I reply that in fact the memory obeys the will very imperfectly, and that it is my opinion that the will only acts very indirectly upon the centre of memory, in such a manner that it causes contraction and expansion, that is, movements of the muscles in the vessels that carry blood to the centre of memory. The organ is excited to increased activity by this rush of blood, and it then may at times supply to the consciousness the wished-for image, which could not be obtained from it as long as it contained less blood and was working less vigorously. So I shall continue to maintain that not a single psychological fact contradicts my assertion that the will is the activity of an organ which imparts movement-impulses. The next questions to be answered are, how the simple movement-impulses imparted by the will can produce movements adapted to the end in view, and

how the will itself can be aroused to its specific form of activity. We can find the reply to these questions if we will bear in mind that life is in every respect a very complex phenomenon, and especially, that all the higher forms of vital activity are the result of the interlocking combined action of different organs. The will merely impels the muscles to contract; nothing else. The centres of co-ordination, however, receive this impulse and transmit it to those muscles that are to be contracted, to produce the intended, appropriate movements, and not merely to produce them in the desired form, but of the desired strength as well. Thus the centres of co-ordination perform the same part in regard to the will, as is performed in an electric apparatus by the relais, derived currents and resistance coils in regard to the battery. But who has taught these centres of co-ordination to know the muscles that are to be contracted to produce a certain movement in the intended way and of the intended strength? The experience of the individual and of the entire race since its first beginnings, an experience that is organic and produces its effects automatically. And how is the will aroused to its specific form of activity? By the operation of all the other centres, by induction, I might say, borrowing an expressive term from the science of electricity. A mere impression on one of the senses will induce the will to issue a movement-impulse, without any intervention on the part of the consciousness; a reflex movement ensues, which is quite erroneously called "involuntary." It is not involuntary, that is, not ordered by the will; it is only unconscious. The automatic activity of the higher centres, that is, the emotions, likewise excite the will. This cause of an action on the part of the will reaches the consciousness with that indistinctness described above as peculiar to the emotions. And lastly, the new and original activity of the consciousness, which has not yet become organic, that is,

judgment, cogitation, can also set the will to work. The judgment alone, does not "will"; it only conceives the idea of some simple or complex movements, or of a long succession of movements, following upon one another, which seem to it appropriate under given circumstances; if the organism is sound, normally developed and well-balanced, then this idea is sufficient to induce the will to issue a movement-impulse. That the movement is completed is then communicated to the consciousness by the impressions received through the muscle-sense. The process thus is like this: the judgment conceives the idea of movements, the will imparts the impulses necessary to them, the centres of co-ordination distribute the impulses as the movement requires, and the muscle-sense returns the intelligence of the completed movement to the brain. The consciousness is only cognizant of the beginning and end of this process—the idea of the movements, which the judgment conceived, and the knowledge that the movements are completed. All that lies between is lost to the consciousness. It knows nothing of the way in which the idea of the movement became the movement. But inaccurate observation has obscured this simple and clear succession of organic acts. Because we become conscious of the ideas of movements and of the movements, the will itself has been transferred into the consciousness. And yet experience teaches us that even the most intensely vivid idea of a movement is not necessarily followed by a movement, and that thus the judgment is as yet far from being the will. In a certain disease called neurasthenia or nervous prostration, the will-centre is beyond the control of the judgment. In such instances we may very well imagine movements, but we are unable to carry them into execution. We may fully realize the expediency of picking up a book, or crossing the street, but we can not induce the

arms or limbs to undertake the motions necessary to these acts; though we are then not paralyzed as might be supposed, but perfectly able to execute the orders of others. One thus afflicted may say very properly: "I will to do it, but I cannot." This is incorrect, however. The truth is that he thinks, but does not will. The judgment-centre does its work, but the will-centre does not. We often speak of persons as having feeble wills. This is, as a rule, incorrect. What is lacking in most of these cases is a well-developed judgment-centre. In these cases the judgment-centre is incapable of producing definite ideas of movement. And for this reason the will also fails to act properly. But when some foreign judgment communicates definite ideas of movement to them, that is, advises or commands them, they carry out these movements effectively, with certainty, and irresistibly, a proof that their will-centre is strong enough after all. The same is true of those cases in which we speak of a conflict in the will, or of some act of passion beyond the control of the will. The conflict is not in the will, but in the judgment. There are not "two contending wills" but two ideas, neither of which is clear and distinct enough to incite the will to issue an impulse. As soon as one idea becomes distinct it triumphs over the other, and sets the will in motion. Hamlet was not weak in will, but weak in judgment. His judgment-centre does not evince sufficient power to evolve a definite idea of expedient movements. Were this in his power, his will would carry the movements into execution, provided that the will-centre is sound—a matter in regard to which Shakespeare has left us without a clew. And when in a passion, one does or omits to do something that the reason apparently forbids or commands, it is not because his "will is powerless to prevent it," as the novelists say, but because the automatic, emotional activity of his highest

centres has been stronger than their free, cogitational activity; the conscious ideas formed by the judgment have not prevailed over the partially or entirely unconscious organic workings of the brain-centres; the will has received the stronger impulse from their automatism, and carried the ideas of movement into execution which were automatically evolved, and not those evolved by the consciousness. The will has thus been powerful enough; the judgment alone has been "powerless" to check the automatic workings of the highest centres, and to impress upon the will the results of its own free and conscious activity.

We shall not countenance this substitution of the will for the judgment, and in cases of indecision or deeds of passion contrary to reason, or of mere habit, we must refer to them as showing a weak judgment and not a weak will. We ought not to surmise the existence of a weak will except in those cases in which a normally developed human being, (and this excludes the cases where the connection between the centres of judgment and of will is disturbed, so that each works powerfully enough, but is unable to exert its proper amount of influence on the other), does not carry into execution the perfectly clear and decided ideas of movements evolved by the judgment, or else executes them hesitatingly and imperfectly, and where the impulses of passion remain mere sentiments, wishes and longings without becoming acts. The only means of estimating the strength of the will is its ability to overcome resistance. It is not the muscles that triumph over obstacles, but the will, the extent of the impulse it imparts to the muscles. Insane persons, whose will-centre is morbidly excited, and thus imparts extraordinarily powerful impulses to the muscles, at times perform feats that would have been considered impossible. Delicate women and aged persons will break iron rods, wrench the links of chains apart, and

wrestle with several strong attendants at once without being subdued. If the same persons were able to perform the same deeds in a normal state of health, they would be reckoned among the strongest individuals of the age. But they are unable to do this, although their muscular system is the same as at the time of their insanity. We see from this fact alone that great manifestations of physical strength do not depend by any means as much upon the muscles as upon the potency of the impulse imparted to them by the will-centre. The first resistance to be overcome by the will is the conducting resistance offered by the tissues, the nerves and the muscles. The shorter the length of nerve-communication involved, the smaller and more delicate the group of muscles to be set in motion, the less this resistance and the feebler the impulse required of the will to produce the movement. The most delicate transverse muscles that we possess are, in their order, those of the throat, the eye, the mouth, the face and the hand. Even a very weak will is sufficient to set these muscles in motion, and enable one to talk, make grimaces, look sad or happy, and gesticulate. This is also the limit of the actions to which ordinary men usually restrict themselves. It is somewhat more difficult to contract the coarse muscles of the arm, and still more difficult to contract those of the limbs and of the trunk. These require a stronger impulsion, and thus, a more vigorous effort of the will-centre. Men with really weak wills thus hardly ever get so far as to follow up their talking and gesticulating with an undertaking that would require them to walk or to work with their arms. And lastly, what is most difficult of all is to perform those movements which have for their purpose the overcoming of external resistance, either of inanimate objects or of living beings. In this case the will has not only to conquer the inward conducting resist-



ance, which our consciousness perceives as indolence or disinclination to move, but the forces of nature as well, (gravitation, for instance), or the impulses of another's will; it has therefore to be able to impart vigorous impulses, more vigorous at least than those imparted by the will opposed to it, if the resistance to be overcome proceeds from a human being. If the will is not strong enough to do this, the ideas of movement conceived by the judgment will not be carried into execution, no matter how clear and definite they may be. We will then know exactly what we ought to do; we will wish most earnestly to do it, and yet we will not do it. What we call lack of perseverance and cowardice is nothing but an evidence of weakness of will. We do not persist in an undertaking or shrink from even entering upon it, if we have either overestimated its difficulties from ignorance, or else, if we are acquainted with it, and do not feel that we are equal to it. In both cases, the judgment fails to clearly define the ideas of movement suggested to it by the circumstances, owing to the fact that the memory recalls other cases in which the will proved itself too weak to overcome similar difficulties. Indifference and cowardice are thus shown to proceed from the knowledge of the weakness of one's will.

The powerful development of the centres of judgment and of will forms thus the organic foundation of the phenomenon which we call genius. A one-sided development of the will-centre is not sufficient to produce a genius. Giants in will-power may be able to overcome all the obstacles that interpose to prevent the execution of their ideas of movement, whether they appear in the form of objects or of men, of laws or of customs; but they will not be able to work out independently any important and appropriate ideas of movement. Hercules performs his twelve labors, but it is at Eurystheus' bidding. A man

endowed with will alone becomes, at the very best, a general under Alexander the Great, a Seleucus, a Ptolemæus or one of Napoleon's marshals; he becomes the famous minister of some monarch with genius, or, as happens far more frequently, the immortal sovereign of some minister with genius; such a man, at the worst, becomes a sensualist, with whose orgies the country and history resound, or a criminal who inspires all his contemporaries with horror—a Cæsar Borgia, or a Schinderhannes. In the former case, he executes the ideas of movement conceived by the centre of judgment of some genius; in the latter, the partially or entirely unconscious designs evolved by his own centres. A one-sided development of the centre of judgment, on the other hand, will produce in itself, a genius, only the character of this genius will vary according as the will-centre is more or less developed in connection with the judgment-centre. A genius in judgment, without any especial will-power, produces a great thinker, a philosopher, a mathematician, perhaps even a scientific investigator. In these occupations there are none but the slightest dynamic obstacles to be overcome, none but the feeblest contracting impulses to impart to the muscles; the judgment is not required to evolve coarse ideas of movement, but reveals its extent and power in another way, by deducing endless, novel, abstract ideas out of the sense-impressions—from a simple contemplation of certain numbers, the Pythagorean principle, the theory of numbers, integral and differential calculus; from the fall of an apple, the laws of gravitation; from the perceptions of the consciousness, a system of philosophy; from the established facts of the doctrine of development and paleontology, the theory of evolution of Darwin. I can not agree with Bain in his classification of genius, when he ranks the philosophical genius above all the rest. My

theory compels me to place the mere thinker and investigator below all the rest in my classification, for their pre-eminence is based upon their judgment alone, but this, in itself, without the co-operation of the will, is not able to realize the ideas it evolves, no matter how wonderful they may be, in phenomena apparent to the senses. Even to express or write them out, a certain activity on the part of some muscles, thus, an impulse of the will, is required. If the will of some genius in judgment should happen to lack even the power of causing the muscular activity of writing or speaking, his sublimest conceptions would be nothing but purely subjective conditions of his consciousness, of which no one but himself would ever have the slightest suspicion. They would be molecular processes occurring in his brain, and would only be perceptible to others to the degree in which they might be felt by another brain through space, and thus find expression at last, if any one could conceive of such a kind of perception, which would be a mind-reading of the highest order.

When a will-centre of good, average formation appears in combination with a judgment-centre of superb development, the world obtains the great minds engaged in furthering the cause of experimental science and in inventing. The nature of the endowments and activity of these two classes is practically identical. The experimentalist as well as the inventor deduces laws from their observation of phenomena, and imagines the material conditions which would enable him to make these laws he has discovered operate according to his own arbitrary will. The difference between them is not a theoretical, only a practical one. The former is content to combine such circumstances and conditions as will show him whether the processes apparent to his senses coincide with the ideas evolved in his judgment; whether a law discovered by his brain-

centres really does operate in the material world; the latter, on the other hand, tries to create such combinations of conditions as have for their sole purpose the promotion of the comfort of mankind, using the word in its most comprehensive sense. But we must be careful to avoid an error here. A discovery, an invention need not be necessarily the production of a judgment-genius combined with a sufficient amount of will-power. Chance may have had something to do with it. The monk, Schwarz, was not looking for gun-powder when his mixture of sulphur, saltpeter and charcoal exploded in his mortar, and Professor Galvani had not the least idea of discovering a hitherto unknown force in nature, when he hung the leg he had just cut from his frog on a copper hook. But on the whole, I am not inclined to concede to chance more than a very limited share in the great discoveries and inventions. An extraordinary power of judgment is after all required to observe an unfamiliar phenomenon with accuracy, to recognize at once that it can not be explained satisfactorily by any facts known at the time, to discover its causes and conditions and deduce new ideas from it. Chance thus is only then the starting point of a discovery or invention, when it has some great cogitational mind for its witness. The emotional average man with his automatically working brain, is deaf and blind to all phenomena which are not covered by his inherited and organic ideas. If the mortar had exploded before the eyes of some average man instead of Schwarz, he would have crossed himself and believed in a diabolical apparition, and at the utmost, have learned from his observation that he must beware of meddling with sulphur again. He would never have invented gunpowder. Accidents pregnant with significance and results are constantly occurring before the eyes of men, and have been always thus occurring. But some extraordinarily power-

ful judgment has first to witness them before they can be comprehended, and their laws and inferences discovered. The entire substance of all phenomena, the foundation of all biological, chemical and physical science, and of all the inventions in the domains of steam, electricity and mechanics, has existed unchanged for all eternity, and it was all there for the human beings of the Age of Stone just as much as for us, today. But before it could be understood and mastered the judgment had to be developed to an extent far beyond that attained by primitive man and even by the ancients. There is no doubt, either, but that at the present day we are surrounded by phenomena of the most wonderful kinds in just the same way, which we pass unnoticed, which we fail to interpret and whose laws we do not attempt to discover, simply because there is no one living at the present time with a faculty of judgment sufficiently powerful to enable him to evolve any conception as to their causes and possible effects from what is apparent to the senses in them. But it is extremely probable that there will be men of genius some day to whom this will be possible, and even easy, and our descendants on the face of the earth will not be able to comprehend how we could have passed by these most striking phenomena, deaf and blind to them, just as we can not understand why men had not discovered thousands of years ago our modern explosives, steam engines and applications of electricity. If we now dismiss the co-operation of chance, which as I have endeavored to prove, has contributed but very little to the success of great discoveries and inventions, the fact remains that attempts to "ask nature reasonable questions," as Bacon expresses it, which are framed with conscious purpose and intention, and to which we expect an answer already more than half divined—that is, the systematic labors of a Robert Meyer, a Helmholtz, a Koch—presup-

pose a genius in judgment, and a well organized will-centre. The co-operation of the will-centre is necessary because it is a very important matter in experimenting and inventing to materialize the ideas conceived by the judgment-centre, which materialization, however, can only be realized by muscular activity, which again is only to be produced by impulses imparted by the will.

When finally the will-centre is developed to the same extraordinary degree as the judgment-centre, when a man appears, a genius in both judgment and will, we salute one of those phenomenal beings who change the course of the history of the world. Such a genius does not find expression in thoughts and words, but in deeds. His judgment produces new and individual ideas, and his will is energetic and powerful enough to convert them into actions in spite of all obstacles. He scorns the more convenient ways of making his ideas apparent to the senses, viz., by sounds and signs, and attempts those in which there is the greatest amount of resistance to be overcome. He thus does not talk or write, but he acts, that is, he disposes of men and of the forces of nature as his ideas suggest. This kind of a genius becomes whatever he wills, and does whatever he wills. He discovers continents. He conquers countries. He rules nations. His career is that of an Alexander, a Mahomet, a Cromwell, a Napoleon. There is no limit to his sway as far as humanity is concerned, unless there happens to be some genius with equal or superior powers of judgment and will among his contemporaries. He can only be defeated by some force of nature stronger than the force of his will. A hurricane might have annihilated Columbus; sickness cut off Alexander in his prime; a Russian winter brought disaster upon Napoleon. The judgment-centre can vanquish even nature itself in its conceptions. The will-centre

is only able to overpower those forces that are weaker than its own energy.

The organization of such a genius of judgment and will entails upon him a partial and in extreme cases an entire lack of all that we call sentiment and appreciation of art and the craving for beauty and love. His powerful centres transform all impressions into clear ideas, and evolve perfectly conscious judgments out of them. There is no automatic activity, with the possible exception of the lower centres of co-ordination and nutrition; the higher centres work in an original way, and not according to the inherited patterns. There is an almost entire absence of dim, partially or entirely unconscious emotions. The genius is not sentimental in the slightest degree. He therefore produces the impression of severity and coldness. These terms, however, do not express anything except that he is purely cogitational and not emotional. It is also an idiosyncrasy of this kind of an organization that the genius is very inaccessible to the finished ideas of others. His centres are arranged to work in an original way, and not in imitation of any precedent. They must have the raw material of sense-perceptions to transform it into new ideas according to their own peculiar process. They can not endure the productions of previous digestion on the part of the judgment of others, that is, raw material of sense-perception already converted into ideas in some other brain-centres, thus just these intellectual peptone, as it were, which form the only food the average man is able to assimilate.

At this point of my considerations, a menacing question arises. If genius is the exceptional perfection of the judgment and the will, if its activity consists in the creation of new, abstract conceptions, and in their concrete realization, what is to be done with the emotional genius,

the poet and the artist? Have I any right to concede that the poet or the artist can be a genius? No, this right is in fact extremely dubious, to say the least. Let us recall what it is that really constitutes emotion. The sense-impressions are transmitted to the proper sense-centres; these sense-centres incite other sense-centres to activity, viz., those that are accustomed to receive impressions conjointly with the others; they arouse the centres of will and of co-ordination and produce some action on the part of the organism—if no more than some expression in the eyes, some change in the rhythm of the heart's palpitations, or some cry, in reply; all this automatically, according to inherited habits that have become organic, without the intervention of the judgment, which has only an obscure, partial knowledge, an undefined suspicion of the processes that are occurring in the lower centres. These processes, taking place outside of the consciousness are just the emotions. The sole task of poetry, music, and the plastic arts is to produce emotions. They all try to start those processes in our organism, by the means at their command, which are caused in a natural way by a certain series of sense-impressions, which we perceive as emotions. The lyric poet with words, the musician with tones, and the painter with colors, endeavor to induce our brain-centres to enter upon that form of activity which they usually perform when incited thereto by the senses conveying to them the impressions which may be produced by a beautiful and love-inspiring being of the opposite sex, of an enemy, a destructive element, a suffering fellow-being, or a certain season. The more accurately they apprehend and reproduce the special characteristics of events, representable by their art, viz., the intellectual, expressed in words, the optical, and the acoustic, the more closely will the emotions excited by them resemble the emotions which the events themselves would have pro-

duced. Any production of the arts of poetry, painting, etc., which does not arouse any emotion in us, is not recognized by us as a work of art, no matter how much our judgment may be convinced that it is intelligently conceived, and executed with vast expenditure of energy and skill and the surmounting of great obstacles. The effect of a work of art thus depends upon the automatic activity of our centres; but this activity is only caused by impressions which the organism and the whole long line of its progenitors have been accustomed to receive; this excludes all genuine novelty from a work of art; it must have, in order to produce any effect, old, accustomed, organic impressions for its main import. But that which we have learned to recognize as peculiar to the genius, is his ability to form new conceptions differing from all those known hitherto, and to convert them into phenomena apparent to the senses. But how does this harmonize with the art which is exclusively occupied in repeating impressions that are old and common to the whole race, which have become organic in the course of time?

The reply to this delicate question causes me some little embarrassment, in so far as I must place myself in opposition to ideas that are quite generally accepted. It is true that the emotional genius is not properly a genius. He does not create anything actually new; he does not give any deeper significance to the human consciousness; he does not discover any truths hitherto unknown, and he has no influence upon the material world, but he has certain psycho-physical conditional qualities that make him a special being, and distinguish him from the average type of humanity. The centres that produce the emotional forms of activity have to be more powerfully developed in him than in ordinary organisms. The consequences of this fact are, that not only do the sense-impressions arouse

his automatically-working centres to a more intensive form of activity, but his consciousness as well, is able to perceive more of it, because it proceeds with more noise, on a grander scale and more pretentiously, as it were. I can make this quite clear by associating it with a previous illustration. An emotional genius is also merely such a mechanical music box, not an independently inventing and independently playing virtuoso; true; but there are music boxes and music boxes, from the tiny apparatus that can only produce a consumptive, scarcely audible murmur, to the mechanical organ, whose thunderous tones can shake the very walls. Thus we can imagine that the automatically-working centres in the emotional genius also play mechanically, it is true, but they play incomparably louder than in the average type of human being; that the former is the organ, the latter the toy music box. And one result of the power of his mechanism is that the consciousness of the emotional genius has more of a share in its activity than is the case with ordinary persons; but of course, merely in perceiving, not creating and influencing. His judgment has no power to alter anything in the automatic work done by his centres, but it can look on and see how it is progressing. In this restricted sense the demand for novelty and originality, which constitutes the work of a genius, is likewise realized by the emotional genius. It is true he only evolves traditional and long-accustomed emotions, but he evolves them in a more powerful degree than other men were able to before him. The effect he produces is thus new in degree, if not in its nature.

A genius is ranked according to the dignity of the tissue or organ upon whose exceptional perfection it is founded. All other systems of classification are unnatural and arbitrary, even when so ingeniously deduced as the



theory of Bain. The more exclusively human a brain-centre, the nobler the genius produced by its special development. It is hardly necessary to explain this idea by any reference to what has been already stated. The development of bone-tissue can not produce a genius, as large bones are not peculiar to the human race, but are found in whales and elephants as well; no more can the development of muscular tissue, which distinguishes a Milo of Croton, but does not raise him above the rank of the stronger animals; neither are the sense-centres adapted to form the organic foundation of a genius, as the condor will always surpass even the most perfect human eye and its centre of light-sensations, while in acuteness and delicacy of hearing man will never be able to compete with certain kinds of antelopes, etc. Even the highest centres are not purely human as long as their perfection does not reach beyond automatism. For the higher animals are also capable of automatic reactions of the organism, when impressions are received from without, and these reactions are unmistakably apprehended by their consciousness as emotions. Actions and the psychical excitations of love, hatred, revenge, fear, and affection, which accompany them, can be observed in the dog or the elephant just as well as in man, and the only difference between animals and men in this respect is that the emotions can be aroused in man by the artificial imitation or symbolization of natural phenomena; while in animals, on the other hand, they can only be aroused by the natural phenomena themselves; thus that with man the interpreting activity of the judgment, consequently also of the memory and reason, participates to a much larger extent in the formation of emotions in man than is the case with animals. The judgment, on the other hand, is exclusively human, in so far as it goes beyond the simple, immediate interpretation of the sense-impressions,

sions, in so far as it forms ideas from them, which do not correspond in any way to events occurring within the cognizance of the senses, so far, that is, to employ the technical term, as it is abstract, and deduces new abstractions from former abstractions. No animal except man has judgment, in this acceptance of the term. And in no animal is the organic dependence of the will-centre upon the judgment-centre so pronounced as in man. The superior development of the judgment and will-centres thus produces a truly human genius, which is the highest manifestation of the organic perfection attained by man up to the present day. Consequently, those men of genius who combine a genius in judgment with a genius in will in one person, rank the highest of all. These are the men of action who make history, who form nations intellectually and materially, and dictate their fate for years to come, the great legislators, organizers, creators of states, revolutionists with distinct and ultimately attained aims, and even conquerors, if they act according to clearly defined conceptions of their judgment and not from semi-conscious impulses. In knowledge these most distinguished geniuses rank as high as those of the next class; they form abstract conclusions from their perceptions with just as much certainty; they discover with equal ease the non-concrete relations between phenomena, their causes, their laws and their remote and remotest consequences in time and space. Yet they have this superiority over them: that they can carry their ideas into execution, not only overcoming the resistance of inanimate matter, but that of living organisms, that of human beings as well; they can thus allow their judgment to conceive ideas, with a view to their being carried into execution by their will, ideas which have for their purport whole nations and even all humanity, and which they can only realize by causing the will-

centres of entire peoples or even of all humanity to be dependent upon their individual will and judgment.

To the second class belong the geniuses of judgment, with a will-power fairly but not highly developed, the great scientific investigators, experimentalists, discoverers and inventors. What causes them to fall below the rank of geniuses of the first class, is their inability to make use of men as the material for the realization of the ideas conceived by their judgment. They will thus be able only to realize such ideas as have inanimate matter for their subject. Their will is powerful enough to overcome inanimate but not animate obstacles. The third class comprises the geniuses of judgment alone, without any corresponding development of will, the thinkers, the philosophers. By their knowledge, their wisdom, their gift of divining events not apparent to the senses, remote both in time and place, they give evidence of being legitimate members of the same family of geniuses as the founders of states and discoverers. But they are incomplete in so far as the ideas, conceived by their judgment in magnificent perfection, remain in their brain, or at the most only become apparent to the senses in the guise of written or spoken words. They have no direct influence upon men or inanimate objects. They do not cause any phenomena of movement. Another's will has first to be incited to action by their ideas before the processes taking place in their centre of judgment can cause any processes outside of their organism. Next to these three classes of genius in its cogitational form, next to the subduers of men, the subduers of matter and the mere thinkers, come last of all, the emotional geniuses, who are distinguished from average humanity by the greater force of the automatic action of their centres, but not by any special original development, and who can only arouse partially or entirely unconscious

emotions in other people, without being able to impart any new, conscious ideas to them, nor any conscious impulses to movement. Among these emotional geniuses then, the poets rank highest, for in the first place, their judgment plays an important part in their work, and in the second place, they produce their effects through a medium, which of all those mediums apparent to the senses is by all means the best adapted to portray the conditions of the consciousness, this supreme substance of all art, and this medium is language. While artists and musicians are restricted to the discovery and reproduction of such special characteristics of the conditions of the consciousness as are apparent to the senses, and which afford only a rather indefinite delineation of them, the poet is enabled to define and specify these characteristics to such a degree that they can be hardly mistaken for any other similar conditions of the consciousness. The lyric poet, "his eye in fine frenzy rolling," perhaps alone can dispense with the co-operation of the judgment, as impressions can automatically incite his centres of speech to activity without going around by way of the consciousness. But in all other kinds of poetry, on the other hand, the poet has to form conscious ideas with his judgment which differ from those conceived by thinkers in this only, that their object is the representation of inherited emotions and not the divination of the abstract relations existing between phenomena.

This classification is the only natural one, as it is based upon organic premises. But the ordinary conception of the different classes of geniuses differs very materially from this. Cogitational natures value the genius according to the benefits with which he endows the race, and according to their comprehension of them; emotional natures according to the strength and agreeableness of the emotions he is able to arouse. A brave and powerful war-

rior is the most important member of any primitive community. Strength of muscle and of will, that is, courage, are therefore prized as the most glorious endowments of a man; the fortunate possessor of them is honored above all other men of his race and venerated as a demigod. In such a community it is evident that no great thinker and investigator, no philosopher, no mathematician, no experimentalist would have any claim to appreciation. If a Descartes or a Newton should arise in some tribe of Indians, he would be considered a useless member of the band, and any successful bear-hunter, any warrior who wore the scalps of several enemies at his belt, would be ranked far above him. And from a utilitarian point of view they would be entirely right, for what Indians require at the stage of development to which they have attained, is not mathematics and metaphysics, but meat and security. It is due to a survival of the opinions of uncivilized and savage men that we must ascribe the supreme rank accorded the soldier in our pretended civilization, and the reverence paid to his uniform, to the war-like tattooing on his collar, his sleeves and the breast of his jacket; a reverence extremely natural and comprehensible in primitive man, but without any rational significance at the present stage of our civilization. And it is just as natural for emotional natures to value a genius in proportion to the emotions with which he supplies them. They are incapable of any original, individual thought, while on the other hand, their automatic, organized cerebral activity may be quite vigorous. Their consciousness is, therefore, not filled with any clearly defined ideas, but with the semi-obscure, confused pictures which we repeatedly have had occasion to describe in these pages, and which form the automatic activity of the brain centres, of which the consciousness becomes aware. The genuine genius, that is, the genius in judgment, requires

conscious, non-organized, non-inherited work of their highest centres, and this they are not able to perform. The judgment-genius, therefore, for them has no existence. The emotional pseudo-genius on the contrary, incites the automatic activity of their centres, and is therefore recognized by them; he is to them a source of sensations, and as life is measured by the sensations it contains, the emotional genius is in their eyes, a sublime dispenser of life. For this reason women will always esteem an artist higher than a thinker and investigator, and among artists, the musician is very naturally the one they appreciate the most, as the emotions which music affords them excite also the nerve-centres of sex and passion, and are therefore the profoundest and most agreeable. But the painter and even the actor have a very high place in woman's estimation; the former because his art does not call for the slightest cogitational activity, and can thus be enjoyed by her without the difficult effort of thought; the latter for the same reason, and also because the effect of his activity in imitating and realizing emotional frames of mind is increased by the human effect of his personality. Emotional natures, among whom woman again takes the lead, will prize the poet according to the degree in which his work is purely emotional and not cogitational; the lyric poet, therefore, more than the epic, the portrayer of external, exciting events rather than the analyzers of mental conditions. Such an estimate of genius can not be the criterion for us, of course. If the strength of the emotions aroused in one is to decide the rank of the genius, then a man would rank his sweetheart, a woman, her lover, higher than any genius that the human race has thus far produced, as there can be no question that Juliet awakens more profound sentiments in Romeo, and Leander in Hero, than Goethe or Shakespeare, Beethoven or Mozart, to say noth-

ing, of course, of Kant or La Place, Julius Cæsar or Bismarck. And I am also of the opinion that if these interesting couples were interrogated, they would not hesitate to proclaim their Juliet or their Leander, the most glorious genius the world has ever seen.

The proper criterion of the rank of the genius is thus not the effect of one personality upon another, as this effect varies according to the higher or lower development of the people upon whom it operates, and the greater or less degree of their cogitational power,—it is the more or less exclusively human character of the brain-centres, whose exceptional development is the psycho-physical foundation of their personality. And as the highest and most human brain-centre is the judgment-centre, the development of the judgment is the sole requisite to a genuine genius, although it requires a corresponding development of the will to make the creations of its judgment-centre apparent to others. The judgment-genius, up to the present time, is the most consummate type of human perfection. Whether the organic development of mankind is to proceed farther, and what direction it will take, this none but a great judgment-genius could divine, by means of his faculty for drawing conclusions from given conditions in regard to what is most remote in time and space.

## SUGGESTION.

The reader has now learned my ideas in regard to the way human progress is accomplished. It does not move forward with a broad front to the battalion, with officers for the rank and file. A very small minority of path-finders go singly in advance; they force their way through the thicket, they blaze the trees, erect sign-boards, and lead the way; the masses then follow, first in small groups, then in dense crowds. Each advancement of humanity is the work of some genius, which performs the same functions in the race as the highest brain-centres in the individual. The genius thinks, judges, wills and acts for mankind; he converts impressions into ideas, he divines the laws of which phenomena are the expression, he responds to all incitation from without with appropriate movements, and is perpetually enlarging the horizon of the consciousness. Humanity at large does nothing but imitate the genius; it repeats what the genius has done before. Those individuals who are normally constituted, well and evenly developed, do it at once, and almost equal the pattern. We speak of them as talented. Those individuals who fall below the average standard of the contemporaneous types of humanity in one or more respects, only accomplish it later and after strenuous exertions; their imitation is neither skillful nor faithful. These are the Philistines.

In what way now does the genius produce his effect upon the masses? How can he induce them to think his

thoughts after him, to imitate his actions? Superficiality is ready with the obvious reply: "Example! Imitation!" With this ready answer we think we have said everything. But in reality it explains nothing; it neither gives us to understand why men and especially animals have that instinct to imitate, nor by what means one being induces another to let his brain-centres and muscles work in the same way as those of the former. Here is a man who thinks or does something. Here is another man who inwardly thinks the same thoughts, outwardly repeats the same action. I can not help considering the thought or the action of the one as the cause, the thought or the action of the other as the effect. I see the example and the imitation. But a chasm yawns between them. I can not see the tie that connects them. I do not know yet how the abyss between the cause and the effect is bridged over. We stand here before a similar difficulty to that confronting cinematics or the science of moving forces, which, it is true, establishes the fact that there is such a thing as motion, and determines its laws with greater or less certainty, but yet has never made the slightest attempt to explain how the motion of one body is communicated to another, how force leaps through the intermediate space not filled with matter, from one atom to another, and operates upon it. The inability of the human intellect to imagine how force or motion, which in itself is not material, but merely a condition of matter, could cross a substanceless space, a vacuum, between atoms, is in fact the strongest rational objection against the doctrine of atoms which has governed philosophy since the days of Anaxagoras, and upon which our present science of mechanics and chemistry is founded; it is this inability which necessitated the acceptance of that utterly incomprehensible ether, which is supposed to surround the atoms, and which has induced some

of the most profound minds of all ages and even of the present day, to prefer the theory of the unity and continuity of matter throughout all space to atomical philosophy, as it is called.

Psychology can overcome this difficulty I believe, far easier than the science of motion. It can appeal to a phenomenon, only recently observed and studied, which is in itself quite a satisfactory explanation of the fact, proved by experience, that human beings influence each other mentally, that human beings imitate others. This phenomenon is suggestion.

One word of explanation for those who may not happen to know what is understood by suggestion in psychology. We learned in the preceding chapter that all motion is caused by the will, and that the will is induced to impart its impulse to movement upon conscious excitation from the judgment, or upon unconscious automatic excitations of an emotional nature. If now these excitations which impel the will to activity do not proceed from an individual's own brain but from the brain of another, if an individual's will becomes the servant of another's judgment or of another's emotions, and carries into execution ideas of movement which originated in another central nervous system, then we say that the actions of this individual are "suggested" to him, and that he is under the influence of "suggestion." Suggestion can be best studied, of course, when it is morbidly exaggerated. This is the case in hypnotism. An individual susceptible of being hypnotized, and thus, as a general thing, of an hysterical organization, is put into this extraordinary state of the nervous system, which has not been satisfactorily explained as yet. The one who has hypnotized him then tells him: "Tomorrow morning at eight o'clock you will go to X street, No. so and so, ask for Mr. Mayer, and stab



him with a kitchen knife which you will take with you." The hypnotized individual is then awakened and allowed to depart. He has not the slightest remembrance of what happened to him in his unconscious state. He does not know Mr. Mayer, perhaps has never been in X street, and besides all this, has never injured even a fly voluntarily. But the next morning he takes a kitchen knife, stealing it somewhere if there is no other way of obtaining it, goes to X street, rings Mr. Mayer's bell on the stroke of eight, and would certainly proceed to stab him, if Mr. Mayer had not been informed of the experiment and taken the necessary precautions. The individual is then seized, disarmed and interrogated as to his intentions. As a rule, he at once admits his criminal intent; sometimes he commences denying the whole matter, and only confesses upon some pressure. If he is asked why he wanted to commit murder, he says, if he is a simpleton, either: "It had to be," or else he maintains an obstinate silence; but if he is a clever or prudent fellow, he invents the most astonishing stories to explain to himself and the rest, what he was about to do. In this case, Mr. Mayer is usually an old friend of the family. He has been conspiring in secret against the individual. He has slandered him, injured him in his profession, etc. The hypnotized individual never has the slightest suspicion that his action has been imposed upon him, "suggested" to him by the judgment of another. But suggestion will not only operate from one day to another, it has been known to have retained its power for six months. A certain act, suggested in the hypnotized state, was performed half a year afterwards on the day previously decided, in all its slightest details, without the individual in question having the faintest suspicion of the suggestion imposed upon him throughout the whole of the intervening period. It is not necessary for a sugges-

tion to take the form of an express command. A hint is sufficient. If the hypnotizer assumes a sad expression and says a few words, no matter what their purport, in a mournful tone to his subject, the latter at once becomes very sad, and speaks and acts as people are accustomed to act at times of the most profound depression. If he is asked, "Do you like being a soldier?" he becomes immediately convinced that he is one, and begins to command, to drill, and perhaps even to swear, in short, to do everything that he considers essential for a soldier, and this even when the individual is a woman. If a glass of water is handed him with the question, "How do you like this wine?" he tastes the wine and is able, if he is a connoisseur, to distinguish the kind and the year of its vintage; if he is allowed to drink much of it he will even become completely intoxicated. I could mention a hundred similar examples of suggestion, which is already the subject of a whole literature in France, where such pre-eminent observers and experimentalists as Charcot, Bernheim, Dumontpallier and Magnin have paid much attention to it.

In all these cases the matter is simply a state of morbid sensibility. Suggestion can not operate so violently upon a healthy human being. It is impossible to make him believe that water is wine, or that he is a cardinal, when he is simply a law student, and it will be a difficult matter to induce him to make over his property with due legal formalities to some stranger, whose name even he does not know. But that suggestion does have some effect upon him also, although in a far more limited degree, and that his ideas and his actions are also under the influence of suggestion, are facts established almost beyond a doubt.

I wished to explain how one person works upon another, how a man happens to imitate the thoughts and

acts of another, but so far, I have only substituted one word for another, in saying "Suggestion," instead of "Example and Imitation." But what now is the essence of suggestion, and how is it produced? The reply which I shall make to this question is of course only a hypothesis, but it seems to me to cover the ground, and it is not contradicted by any fact observed up to date. Suggestion is the transmission of the movements of the molecules of one brain to those of another, in the same way as one string communicates its vibrations to some neighboring string, or as a hot iron rod held against a cold one, will communicate to the latter its own molecular motion. As all ideas, judgments and emotions are processes of motion of the brain molecules, it follows of course that the transmission of this molecular motion to another brain, communicates at the same time the judgments, ideas and emotions, the mechanical foundation of which is this very molecular motion.

To make this perfectly clear, I have only to add a few brief details. As we demonstrated in the preceding chapter, our organism has but one single means of making the state of its consciousness—that is, judgments, ideas and emotions—apparent to the senses of others also, and this is, by movements. Certain states of the consciousness are the cause of certain movements, which are thus the expression of them. We become accustomed to associate the movements with the states of the consciousness that occasion them, and from them to form conclusions in regard to the latter. A movement is either a direct or a symbolical expression of some state of the consciousness. When one man hits another a blow with his fist, this muscular action is the direct expression of a state of the consciousness which represents the idea, "I will strike." On the other hand, if a man droops his head and sighs, this movement of the muscles of the neck and chest is the symbolical ex-

pression of a state of the consciousness, which we may call depression or melancholy. The symbols of the states of the consciousness can be separated into two groups, the natural and the conventional. The natural symbols are those that are organically associated with certain states of the consciousness. The latter can not occur without producing the former. Yawning and laughing are the natural symbols of fatigue and merriment. The constitution of our organism is such, that in a state of fatigue, that is, by an accumulation of the results of decomposition occasioned by work (of lactic acid, for instance), in the tissues, the nerves that innervate the respiratory muscles become incited to action, and thus produce a cramp in these muscles, which we designate by the term yawn. As the prominent features of the organism are the same in all men and to some extent in all living beings, the natural symbols are the same throughout all humanity; they are understood by all men and even partially by the higher animals, and the experience obtained by mere observation of self is all that is needed to interpret their significance and to divine the state of the consciousness which the symbols in question are meant to express. The conventional symbols, on the other hand, are those that are not organically associated with the state of the consciousness they are supposed to represent, and are not necessarily produced by them, but have obtained their significance by a conventional acceptance of them by mankind. Nodding the head and beckoning with the forefinger are conventional symbols of those states of the consciousness which comprise the ideas: "I agree with you," or "Come here." Our giving these interpretations to these movements is an arbitrary procedure on our part (and yet not entirely arbitrary after all, the conventional symbols having their origin rather in the natural symbols as well; however, this is not

the place to develop this idea), and they do not have the same interpretation among all peoples. The Orientals, for example, do not move their head up and down in token of assent, as we do, but from the right to the left and back again. The best and most important example of a conventional symbolical movement is language, this result of the vital activity of our organs of respiration and speech. To divine the state of the consciousness of which any word is the exponent, we must have learned to associate the two together, and the experience gained by observation of self is not sufficient for this. The wisest man in the world would never guess that "Fu" meant bliss, unless he understood Chinese.

The molecular movements in the brain which produce states of the consciousness, thus produce muscular movements. These movements are apprehended by the brain of another person by means of his senses; that is, with the aid of some or of all his senses. Some movements and the traces they leave behind them, such as written characters, for instance, appeal to the sense of sight, others to the sense of hearing, still others to the touch. The sense receives the impression and hands it on, and starts the process of interpreting it, that is, it induces some centre to convert the impression into an idea, and places the consciousness in that same state, of which the muscular movement, apprehended by the sense, was the outward manifestation. Associating this process with mechanical principles we can describe it in some such way as this: The changes in the sensory nerves produced by phenomena of movement, occasion in their turn changes in the sense-perceptive organs of the brain, which in turn induce molecular motion in the centres of consciousness, the character and strength of which depend upon the nature of the excitation, that is, upon the character and strength of the molecular motion

in the other brain, which was the primal cause of the muscular movement. Thus by means of the muscles on one side, and the senses on the other, the state of one brain is mechanically communicated to another, and this is what is meant by suggestion.

For one brain to accept the molecular motion of another in the manner just described, that is, to repeat the judgments, ideas, emotions and will-impulses of the latter, it should not be the scene of any molecular motion of its own of a different kind, and of equal or greater strength. In other words: it must not be able to perform vigorous mental labor for itself, just as a vibrating string can only move another that is at rest or nearly so, and cannot incite a larger string or one vibrating in a different way, to produce its own tone. The more organically insignificant a brain, therefore, the more readily it will obey the impulse to movement proceeding from some other brain; the more complete and powerful the brain, the more energetic its own processes of movements, the greater the resistance it offers to the other brain. Thus, under normal conditions, the individual of greater perfection exercises a suggestion upon the individual of less perfection, but the reverse is not the case. It is true that the processes of movements of even less complete brains can, by combining, attain such a degree of strength, that they can overcome the processes of movement of even an extremely perfect brain. When large numbers of men are feeling and expressing the same emotions, even very strong-minded and original individuals can not escape their influence. They are compelled to participate in these emotions, no matter how much they may try to prevent the evolution of this particular state of the consciousness by diverting ideas and judgments. The explanation of the fact that suggestion can be practiced most easily and successfully upon hypnotic individuals is,

that in this condition of the nervous system, the molecules of the brain have the least possible motion of their own and are in an especially unstable state of equilibrium, so that the slightest impulse will set them in motion, the character and strength of which is determined by the nature of the excitation.

The impressions on the senses by which the suggestion is effected may be perceived by the consciousness, but it is possible and even probable that there is perpetual molecular motion in the brain caused by similar sense-impressions, of which we are not conscious in the least. The London Society of Psychological Investigation has published report after report which have established this fact beyond a doubt. One individual, in a room with another, draws on a slate figures which the latter has thought in his mind. Of course the person drawing the figures has his back turned to the one that is thinking; the latter does not utter a word, and there is not the slightest possible intercourse, apparent to the senses, between them. In other tests, one person wrote words, figures and letters which another thought. Some times these experiments were successful, and at other times they were failures. However, they succeeded so frequently, that the idea of chance has to be excluded. The society is a serious one and consists of men of acknowledged integrity, some of whom have the reputation of learning. It has nothing to do with spiritualistic frauds, and although it has laid itself open to unfavorable criticism to some extent by its inquiries into the subject of ghosts, yet we have no right to depreciate the rest of its work on this account. The possibility of unconscious suggestion can the more readily be conceded, as it is capable of being satisfactorily explained by facts already firmly established. Every idea that includes a movement, (and there are no other kinds

of ideas, as even those apparently the most abstract of all, are still composed ultimately of images of movement), actually produces this movement, although perhaps in the slightest degree imaginable. The muscles which are to perform the movement in question receive a very feeble impulse, and the higher centres become aware of it through the muscle-sense, which announces the receipt of the impulse. We must imagine the process to be like this: that the memory, the reason and the judgment in composing any idea occasion an innervation of the muscles which are to take part in its execution, and that the idea does not attain to its fullest intensity until the judgment receives information of the completed innervation. Stricker of Vienna, was the first to observe and demonstrate this fact, although at first only in respect to the development of ideas of sound. If we think—according to the learned experimentalist in pathology—for example, the letter B, this idea causes an innervation of the muscles of the lips which co-operate in the production of the letter B. The idea "B" is therefore in fact an image of that movement of the lips by which the B is produced, and the movement is also perceptible in the lips, although of course it is very faint. What Stricker says of the movements of the muscles of the apparatus of speech, probably applies as well to those of all the other muscles. When the idea of running occurs to the consciousness, there is a sensation of movement in the muscles of the lower limbs, etc. The reason why every idea of movement is not followed at once by the movement itself, is owing to the fact that, in the first place, the impulse which is imparted to the proper muscles by the mere image of movement, is too feeble to produce an effective contraction in them, and, in the second place, that the consciousness opposes all images of movements which it is not intended to carry into execution, by an idea intercepting

them. If the idea is a very animated one, or if the consciousness has not sufficient energy and practice to evolve preventive impulses of sufficient intensity, the mere image of the movement is in fact all that is necessary to produce at least an outline sketch of the movement itself, distinctly apparent to the senses. We murmur the words we are thinking of; we begin to talk to ourselves; we indicate with our hands and arms the series of movements we have in our minds; we gesticulate. Soliloquizing and gesticulating,—these qualities of vivacious persons and of those not sufficiently trained to self-control, qualities observed, however, also in calm and well-trained individuals, at moments of exceptional excitement—are special confirmations of the correctness and universality of Stricker's law in regard to the "images of movement." But what is grossly apparent to the senses in soliloquy and gesticulation is constantly occurring and at every separate idea, only that it occurs in a very slight degree, usually not perceptible to the senses in a conscious way. The word we have in our minds, we form in fact with our organs of speech; the movement we are imagining, is executed in fact by the proper muscles, in a manner which indicates it at least. And as it is a fact that we only think in words and other images of movement, I can assert that we actually do utter all our thoughts in words and gestures. Of course, as a rule, this unconscious soliloquy, this unintentional byplay of speech and gestures is not heard and is not seen. But it would be noticed at once if our senses were either sufficiently acute, or if we had instruments similar to the microscope and the microphone which would make the most infinitesimal movements of the muscles of the apparatus of speech, of the limbs, face, etc., distinctly visible and audible. But who can assert that our senses, or at least the senses of some exception-

ally constituted individuals, do not apprehend these slightest of all movements? We do not become conscious of it, of course, but this is no proof that it is not the case in reality. For we know by experience that an impression on the senses must be of a certain degree of strength in order to be transmitted from the centre of perception to the consciousness, and that even quite powerful sense-impressions remain unnoticed by the consciousness, when its attention is not especially attracted to them, but that these sense-impressions, (overlooked by the consciousness owing to its being insufficiently aroused, or inattentive,) do nevertheless occur, and are manipulated automatically by the brain, outside of the consciousness, in the emotional way. And hence it is not merely possible, but also very probable, that our minds are perpetually under the influence of the minds of others. Unnoticed by the consciousness, but perceived by the brain-centres, all our human surroundings far and near, are talking to and gesticulating at us, millions upon millions of faint whispers and slight gestures are crowding upon us, and in the confused medley we are literally unable to hear our own voice, unless it is powerful enough to drown the tumult around us. The consciousness of all other human beings is operating upon our consciousness, the molecular motion of all other brains is being communicated to our brain, and it accepts their rhythm if it has not a more energetic rhythm of its own to oppose to it, although even a more energetic rhythm is likely to be modified by the rhythms swarming upon it, if it does not accommodate itself entirely to them.

This would be unconscious suggestion. We will now leave it and return to conscious suggestion, which may not be the most important, but which we are able to comprehend and define with more certainty. It is produced by all the different manifestations in which the dif-



ferent states of the consciousness find expression, most frequently by spoken words, but often also by actions which can be observed. The thought uttered aloud, according to the process described above, will arouse the same thought in the brain of the reader or hearer, the completed action will incite the same action in the will of the spectator. None but the minority of original beings, the men of genius, will be able to resist this influence entirely. All education, all training is suggestion. The still undeveloped brain of the child shapes itself according to the molecular motion communicated to it by the parents and teachers. It is by means of suggestion that the example of morality as well as of depravity produces its effect. The mass of people perform acts of love or of hatred, of refinement or of vulgarity, of humanity or of bestiality, according as they or the reverse are "suggested" to them by the master-minds of the period. What is all this talk about the *Volkseele* or the national character? These are words without any meaning. The national character is something different in every age. The folk-soul changes from day to day. Are examples needed? Here are several. The German people of the last generation were weakly sentimental, enthusiastically romantic, in short, emotional. In the present generation they are severely practical, coolly deliberate, acting rather than discussing, calculating rather than heedless, in short, cogitatorial. The English people were morally corrupt in the first third of this century; they drank, swore, were immoral and flaunted their vices in broad daylight; nowadays they are affected, virtuous to prudishness and respectable to the last degree; they find their popular ideals in temperance societies, in the philanthropic rescue of outcasts, and an excess of devotion; they avoid all suggestive allusions in conversation and indelicate conspicuousness

in conduct. This utter transformation is the work of only thirty or fifty brief years. How is it possible to believe and assert that a people's ways of thinking and acting are the results of any special organic characteristics? Such characteristics could only alter in the course of ages. The whole matter is something entirely different from what the professional psychologists of peoples have hitherto asserted. Suggestion is the key to the whole matter. The phenomenal human beings in a people "suggest" to them what we call the *Volkseele* and the national character, and erroneously accept as something enduring and unchangeable, while it is perpetually undergoing modifications from some isolated intellects. We must imagine the process as a small group of exceptional men standing in front of a people or even of a race, as Dumontpallier stands in front of a hypnotized hysterical patient, suggesting thoughts, sentiments and actions to the people or the race, which without resistance or criticism, thinks, feels and acts according to them as if impelled thereto by its own consciousness. If these exceptional beings suggest virtue and heroism, the world beholds a nation of Knights of the Holy Grail and Winkelrieds; if they suggest vice and meanness, history has to relate the decline and fall of another Byzantium. Confucius rears a nation of cowards, Napoleon I, of warriors and victors. The genius forms the people after his image, and those who wish to study the folk-soul will find it not in the masses, but in the brains of the leaders. A larger or smaller degree of force, however, is always organically represented in a people. It is true, all its thinking and acting is suggested to it, but if it is a strong people it will obey the suggestion intensively, while if it is feeble, it will obey it but feebly. The difference is like that between the steam engine of 1000 and that of 1 horse-power. There is the same con-

struction, the same motive forces, the same shape; but the one removes mountains, and the other runs a sewing-machine. And thus one people is mighty in virtue and vice, while another is insignificant in good as well as in evil; the one people places great, the other small powers at the disposal of its men of genius. But that which predetermines the way in which this organic power is to be applied is the suggestion that these exceptional beings exert upon the masses. Consequently let us not speak of a folk-soul but, at the utmost, of a folk-body, a folk-fist, a folk-stomach. On the other hand I believe indeed, that it is organically inherent in a people to produce men of genius with greater or less frequency; this, however, is a subject which I will discuss in one of the following chapters.

The uniformity in ideas and sentiments prevailing in a people, is thus not to be explained by any organic uniformity, but by the suggestion exerted upon all the individuals of a people by the same historical examples, the same living chiefs of the nation, and the same literature. In this way the citizens of large towns come to have the same mental physiognomy, although as a rule they have the most various origins, and are of the most diverse races. A citizen of Berlin, of Paris, of London, has certain psychological qualities that distinguish him from all other individuals foreign to his city. Can these qualities be founded upon anything organic in him? Impossible! For the population of each of these cities is a mixture of the most varied ethnological elements. But they are all under the influence of the same suggestion, and therefore necessarily reveal the uniformity in thought and action which attracts the attention of all observers. Aberrations in taste and manners, moral epidemics, tides of hatred or inspiration which at certain times sweep whole nations along with them, first

become comprehensible by the knowledge of the facts of suggestion.

We have seen that the principal means for the transmission of ideas from one consciousness to another is language. But words are only conventional symbols of states of the consciousness, and herein lies a great and sometimes insuperable difficulty to the promulgation of entirely novel ideas. A genius evolves some idea in his consciousness which has never been evolved in any other brain before. How will he endeavor to express this new and original state of his consciousness so as to make it cognizable by the senses of others. Of course by words. But the meaning of words has been established by agreement. They represent states of the consciousness, which have been known before. They arouse in the hearer merely the old idea always associated with them. If the hearer or the reader is to accept a word as the symbol, not of the idea of which it has hitherto been the exponent, but of another idea, altogether unknown as yet, a new conventional agreement has to be made for it, the genius must endeavor to explain his new conception in other ways, by referring to the similarities and the differences which exist between the new idea and the one to which it has been applied hitherto. This can only be done approximately, seldom or never completely. Our language bears the traces of these efforts on the part of the exceptional men of original thought to transfer novel ideas to the brains of the masses by means of the old symbols, in almost every word, in almost every turn of expression. All figurative language is due to this cause. When the same word—like the German *Minne*—first signifies remembrance and then love, it reveals the mental labor of some original genius, who in order to express a new idea, the idea of self-sacrificing, loyal tenderness, had to make use of some term which up

to that time had been used merely to express some other less subtle, but at the same time superficially related idea, the idea of simple remembrance. Each genius by right should have a new and individual language to convey his novel ideas correctly to others. He is obliged, however, to make use of the language already existent, that is, the symbols of previous states of the consciousness of other individuals, and hence confusion often arises, as he means his words to have another significance than that attributed to them by the hearer, for whom they can only have the conventional meaning for the present. The genius might be compared in fact to a man pouring new wine into old bottles, with the distressing circumstance added, that the one to whom the bottle is delivered has to judge of the wine merely from the looks of the bottle, being unable to open it and taste of its contents.

The nature of all language, the circumstance that it is formed of symbols of old and oldest ideas, and that it has to give a figurative significance to its word-roots, to enable them to serve, as best they may, for designations descriptive of new states of the consciousness, is a powerful obstacle in the way of the genius when he tries to communicate his thoughts to the brains of the masses. The latter are inclined of necessity to confound the novel, figurative significance of the word—deepened in sense and applied in an original way, as it is by the genius—with its old and literal meaning. The old and oldest ideas live on in the midst of the new ones, to disturb and confuse them; the masses, when the axis of the earth is referred to, think of something somewhat after the fashion of the axle-tree in a cart, and when the electric current is mentioned, of a fluid running through the inside of a wire, as water runs through a lead pipe, and often when the genius has meant to illustrate an idea by a word, it has only served to

render it still more obscure, and instead of arousing his own ideas in the other mind, he has only succeeded in arousing some diametrically opposed to them. But this is all nothing but one more of the limitations of humanity which it is beyond our power to alter. Perhaps in time our organism may develop onward so far that the states of the consciousness may not require conventional symbols to express them, but will be able to manifest themselves directly. In this case the original brain will no longer require words to communicate its molecular motion to other brains; merely to think an idea clearly and definitely may possibly be all that is necessary to cause it to be diffused through space like light or electricity and "suggest" it in others, and we will no longer be obliged to clothe it in the old patched rags of a language, which compels us, for example, to express the idea of an All of which we are a part, by the word nature, which meant originally one that bears young, and thus arouses in our minds the idea of a mother, with all the attributes of the female of the mammalian type. But until we shall have attained to this mythical perfection, we must content ourselves with language, and only strive honestly to comprehend each other's ideas as far as this may be possible.

## GRATITUDE.

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The English satirist defined gratitude as "a lively sense of future favors." He merely meant to be facetious, and gave in reality an exhaustive definition of the essence of this sentiment. In all normal and naturally feeling individuals gratitude is based upon a distinct or vague expectation of further agreeable actions. If it is positively impossible to hope for any continuation or repetition of the benefit, then all sense of obligation to the benefactor ceases entirely, or if it does still feebly survive, it is only in consequence of organic habit or, in accordance with our code of morals, of the artificial repression of the natural processes occurring within us for the gradual re-establishment of a normal state of sentiment. I believe with the evolutionists, with Darwin, Spencer and Bain, that all human sentiments had their origin in their necessity or their usefulness in the preservation of the individual and of the race. We experience love, for instance, at the present day as agreeable, disapproval of our actions by public opinion, as disagreeable. This is easily explained by the theory of evolution. If one primitive man experienced agreeable sensations through love, while it aroused no sensations of the kind in the organism of another man, his companion, the former would make every effort to obtain these sensations, while the latter would hardly have taken any trouble to procure them. The former would leave many, the latter few or no de-

scendants behind him. The organic characteristics of the fathers are repeated in the offspring; those who long for love become more and more numerous, those indifferent to love, less and less in number, and finally become entirely extinct, so that in time none survive but those in whom love is associated with agreeable sensations. In the same way, of two primitive men, the one who was indifferent to the opinion of his companions in the tribe would easily commit actions which might annoy or injure the rest; they would not endure this very long and would speedily procure less favorable conditions of existence for him by expelling him from their number, or cut the matter short by killing him; the other man, on the contrary, who was continually observant of the effect of his actions upon his neighbors, would get along well in the tribe, receive assistance and protection from the rest, and thus be able to live more comfortably and securely, and rear more offspring, to whom he would bequeath his organic characteristics, until among the human beings of the present day we find no one in whom the idea of being at variance with public opinion does not arouse a feeling of uneasiness sufficiently strong to cause them to refrain from actions which might arouse the hostility of public opinion. But is gratitude an instinct which is susceptible of being explained by the principles of evolution? By no means. Gratitude is something that could never have been useful to primitive man; it could never have obtained any more favorable conditions of existence for him. He was not benefited by this sentiment in any way, and the lack of it could not have entailed any disadvantages upon him. If we examine the subject closely we will even find that an individual endowed with a disposition to gratitude would be worse off than those who were free from it; for while the former was wasting his time with attentions and his strength with actions which could

not be of any conceivable advantage to him, the latter was employing his time and strength for his own profit. Hence gratitude is not and never was necessary to the preservation of the individual and of the race in any case, except when the sentiment is prompted by selfishness and self-interest and has for its object to persuade the benefactor, by deference and flattery, to bestow still further benefits, and for this reason it could never have become an instinct in man. How then do we explain the fact that gratitude is nevertheless the foundation of all our human ideas of religion, that man praised the gods for the gifts they showered upon mankind, that he manifested his appreciation of them with sacrifices, and that he held the dead in grateful reverence, his own progenitors as well as the heroes of the tribe? Simply by the gross errors of an ignorant mind. Men considered the gods, the dead ancestors and the heroes, living beings who had still the power to benefit them, and their sentiments of tender devotion, their sacrifices and forms of worship were not manifestations of gratitude for past favors but urgent invitations to bestow still further ones in the future. Even at the present day the superstitious fundamental principle of the existence of a personal God, endowed with the attributes of humanity, and of the continuance of the individual after death, still prevails in many minds, and is the cause now and then—not very frequently, it is true—of manifestations of gratitude for past benefits. In the far distant future when this superstition which has become organic in the habits of thought which have prevailed for hundred thousands of years, has vanished, the very last trace of hero-worship in its present form will have vanished also. Perhaps even then monuments will be erected to the memory of great men, their graves may be kept sacred and their birthdays celebrated, but no longer with the idea of

doing them a favor, of acquitting a debt to them, of doing anything in acknowledgment of benefits received, but exclusively with the object of training the people, with the purpose of causing the figure of the hero thus honored to operate as a suggestion upon the masses and to stimulate an imitation of his virtues, and because society will always experience the need of promulgating in ideal figures those qualities which it must exact of its members in the interests of its own self-preservation.

For there to be any sense or object in gratitude for any act, it should be manifested before the completion of the act. Then it might have some influence on the act itself, its nature and scope. But of what possible use is it when the act is once performed? What can it change in it then, how can it make it any better or worse? When the Moor has done his duty there is nothing left for him to do but to go, and if he complains, any one who has time for such a superfluous task, can give him a lecture on the subject of the laws of nature and explain to him that the present and the future have no influence upon the past, and that an objective act remains to all eternity just what it is, whether the Moor who performed the act makes a wry face or wears a pleased expression afterwards. There is no need to urge that the example of gratitude or of ingratitude, although it may not be able to have any influence over the action of which it is the cause, may yet affect decisively future actions; that the reward of veneration paid to some predecessor may incite his successor to follow in his footsteps, that the spectacle of ingratitude to the dead may cause their descendants to refrain from making efforts of an altruistic nature, which otherwise they might have attempted. This is not the case at all. The genius performs his benefits for mankind because he is obliged to do so and can not do otherwise. It is an instinct



organically inherent in him, which he is obeying. He would suffer if he did not obey its impulse. That the average masses will benefit by it, does not decide the matter for him. The stream dashes on its way because the laws of hydraulics require it thus. But it is by no means essential to the stream whether there are or are not any mills along its banks, which obtain their motive power from it. The picture of Scipio seated amid the ruins of Carthage has never evolved an Ephialtes out of any possible savior of his country in embryo, though the idea of an old man cowering in a draught between some broken stones with sharp angles, who would probably stumble over piles of rubbish or fall down some cellar-way, if he attempted to go forward, will always have a deterring effect upon any one, unless it might be some member of a voluntary fire alarm company. And I call upon the publishers of Germany to witness whether the remembrance of Camoens, whom his ungrateful countrymen allowed to perish of privation and want, has diminished to any appreciable extent the production of poetry!

The reader has already discerned that the gratitude of one individual to another is excluded from the present discussion because it can not be considered as an instance of unselfish sentiment, hoping for no further reward, and of no possible advantage to the grateful being but only to the recipient of it; we must consider it as a more or less wise investment of capital from which the investor hopes to receive fair returns, and hence, as something not pertaining to the domain of moral philosophy, but to that of business. The gratitude of the people in general to some one individual whom they do not know personally, from whom they personally have nothing to expect, who may be already numbered among the dead, this alone would be an instance of such gratitude. But we would seek in vain through the

whole history of mankind for even one such example susceptible of proof as a perfect example of this, which could not be traced to national vanity or superstition or to some other interested motive.

No, there is no such thing as gratitude of the masses, of the people, or of mankind in general, and can not be, because it has no anthropological foundation. The men of genius, the work of whose brain supports the race, who accomplish in themselves all the progress the race make, who represent the impetus to all new development, should abandon all idea of thanks. They must find their sole reward in the fact that, thinking, acting, originating, they live out their higher qualities, and thus become conscious of their originality, to the accompaniment of powerful sensations of pleasure. There is no other satisfaction for the most sublime genius, as well as the lowest living being swimming in its nourishing fluid, than the sensation, as intensive as possible, of its own Ego. The genius sometimes flatters himself with visions of immortality. He is wrong. Immortality, which Klopstock calls a "beautiful thought," is even something less than a beautiful thought, it is a fantastic picture of the imagination, a shadow of one's own individuality projected into the future, resembling the shadow of a tree cast far across the plain by the setting sun. The moment the tree is felled, its shadow vanishes also. The idea of the perpetuation of one's name, the effort to secure posthumous fame, proceed from the same source in which the superstitious belief in a personal existence after death had its rise. It is another manifestation of the resistance of the living individual to the cessation of his consciousness, one form of the impotent struggle against the universal law of the finiteness of individual existence, one more proof of the inability of the thinking, and consciously perceiving Ego

to imagine itself as no longer thinking, no longer perceiving its own existence. The man who has created something grand, who has benefited his people, or all humanity, might surely count upon that feeblest and cheapest form of gratitude which consists in the perpetuation of his memory. Vain wish and vain efforts! The memory of the human race is unwilling to retain the name and the appearance of individuals, and even to prolong the faint reflection of their personal existence beyond the natural limits of human life. How long do even the most famous names last? Up to the present time mankind has no record of any that are more than ten thousand years old, and what are ten thousand years in the life of mankind, to say nothing of the life of our planet or of our solar system! Only when living human beings expect to realize some material advantage in not allowing the memory of certain persons to decay, do the masses retain a clear remembrance of them; as in the case of the founders of religions or of a reigning family; for here the priests and the monarchs have an interest in artificially restraining the people from obeying their deeply seated, and in the long run irresistible instinct of ungrateful forgetfulness. But where there is no such interest at work, mankind hastens to forget the dead, even when they have been its greatest benefactors. It is truly pathetic to observe the despairing efforts made by the individual to withdraw his individual form from the operation of the law of annihilation. He piles enormous stones into gigantic monumental edifices, he compels bronze to retain his lineaments, he writes his name on every page in books, he engraves it in marble and bronze, he associates it with endowments, streets and cities. The palaces and the statues, the books and the inscriptions are to proclaim this one name in the ears of the human beings of the remotest ages, and remind

them that once it was borne by a great man and that this great man has won the right to the grateful reverence of all posterity. The inanimate objects to which the individual confides the task of perpetuating his memory do not perform this duty long. Even when they escape destruction, they lose their voice and soon cease to proclaim the name which they were to have repeated to the latest generations. The palace serves men who invent some arbitrary legend to account for its origin; they apply to the statue any name they choose; even in the name of the city, the name of its founder is obscured, as when Constantinople is transformed into Stamboul, and they erase unconcernedly the traces of the great man, as an unconscious child erases the letters on a slate with its finger in its play. And who would rebuke them for doing so? Only those who have no realization of the plainest phenomena and conditions of organic life. The individual is of no value except to himself; he is of no value to nature, of none to the totality. In the eyes of nature he is merely a mould in which matter receives its organic shape; a way-station on the great line of development of matter from the inanimate to the animate. When the casting is finished the mould is destroyed. When the way-station is once passed, it is speedily forgotten. That which is enduring in the individual and which is destined to an existence without any apparent end, his propagating principle, extricates itself from him and enters upon another new and independent life which has no longer any need of further connection with the organism in which it was evolved; the parental organism then decays like the blossom from which the fruit has been developed. The same process occurs in the mental functions of the individual. They detach themselves from the physical being, become objective and form phenomena on their own account, and it is by no means necessary for the

perfection of these phenomena that they suggest in any way the individual who originally produced them; they are what is destined to endure in the mental individuality like the propagating principle in the physical, and when the mind has imparted its best, when it has produced living thoughts and actions which continue to operate independently and are able to evolve new life, it is not unjust that the mind shares the fate of all living and life-giving things and vanishes. The old myth of Saturn devouring his own children is founded upon a mistaken conception of nature. It is not the father who eats up his offspring, but the children who devour their parents. This instance of intense, utterly regardless selfishness is not shocking. On the contrary. It is terrible and beautiful at the same time like all the grand phenomena of nature. The offspring in receiving the germ of life from the parent and carrying it on farther into the future, thus renews the youth of the parental organism in so far as what is really essential in it is concerned. This labor of preserving the essential taxes the energies of the new organism to such an extent that it has none left for the preservation of what is unessential, that is, the accidental individual form of life of the parent.

The law which I might designate as the reversed Saturnian law, by virtue of which the parent sinks into obscurity in exact proportion as the offspring advances into the light, admits of no exceptions. As no human being exists who has preserved his remote ancestor alive in himself, in the same way there is no product of the human intellect that has run its entire course accompanied by the one that originated it. How much do we know of the persons to whose mental efforts we owe our entire civilization and culture? How great was the man who first gave us fire? Who has retained any remembrance of him?

Who ever thinks of remembering him with gratitude when he is basking in the heat of his stove in winter? What a genius the man must have been who first conceived the idea of something beyond the accident of happening to find plants, and of systematically exacting the necessary grain from the soil! Do we ever invoke a blessing upon his name when we are enjoying our daily bread? At the present day we still know who invented the telegraph, the steam engine, the railroad. But these inventions are of yesterday. Some of the human beings before whose eyes they were evolved are still alive. How long will it be before the Graham Bells and the Edisons, the Papins, Watts and Stephensons, are forgotten like the equally great or greater inventors of the artificial production of fire or of agriculture, who are now unknown; and how long will it be before mankind will use its telephones and express trains like its fire and its bread, without the slightest tribute of grateful remembrance to its benefactors? And the inventors are no worse off than the thinkers, the conquerors, the statesmen, the artists. A truth is discovered, it is and remains to all eternity the possession of mankind, but after a few generations no one ever devotes a single thought to the one who discovered it. The specialists still know to whom the world owes the separate advances made in mathematics, in the physical sciences and astronomy. But how many are there even among the educated and highly educated who would be able to define the personal share that Pythagoras and Euclid, Hero of Alexandria, and Descartes, Aristotle and Harvey, and even such recent figures as Lamarck and Schwann have had in the formation of our knowledge of nature and of our comprehension of the universe. Who were the individuals that created the political institutions of Rome, the main features of which are still retained in our methods of government to

the present day? Who knows the names of those lawgivers, (not the compilers,) who originated the decisions in the Roman Code of laws, which still govern our legal procedures? The work still stands, but the originator is sunk in oblivion or lost in legend. The Iliad is still read, although, it is true chiefly by college students, who do not enjoy it over much, but Homer is so utterly lost to us that even the very fact of his existence can be denied. The Nibelungen legends live and flourish, but their author is swallowed up in the past. We know as little who created the Venus of Milo as the name of the sculptor who chiselled the Apollo Belvedere.

It is in vain for the genius of the present day to think that henceforth all will be different. Personal fame consists of newspapers and books and carved inscriptions on bronze and stone. The breath of time wafts all of these away like the ashes of a scrap of burnt paper. A few thousand brief years and all has vanished. But humanity has still perhaps many millions of years before it. Bismarck will share the fate of the founders of states in the past, Goethe and Shakespeare will sink into the oblivion where are now the author of the Book of Job and the minstrel of the Vedas, but the German nation will develop mightily onward, and Faust and Othello will arouse profound emotions in the heart of man as long as German and English are understood upon earth.

"The traces cannot, of my earthly being, in æons perish—they are there!" Faust persuades himself with consoling complacency. He is right, literally. His traces, that is, what he accomplishes, will not soon perish, if it is valuable. But he is wrong, if he associates with the perpetuation of his traces, the idea of the perpetuation of his individuality. He rescued a country from the ocean? Very well. A gay and busy people dwell upon it and

rejoice in life and sunshine. But as to any gratitude to the man who constructed the dike and procured them their fertile fields, there is none of it. Gratitude does not make the harvest any more abundant nor the country any more flourishing; the people are not compelled to feel grateful, and therefore they do not feel so.

The science of political economy has established the fact that the value of things to man depends upon the greater or less facility with which he can obtain them, and not upon the degree in which they are indispensable to him. Of all things air is the most necessary to human beings; but it has no value because he can procure it at all times without effort, because he has no labor to perform to obtain the amount of air he requires for breathing. We can compare the productions of the genius in this sense to those things which have no value. Once completed, once become objective, they become a part of nature itself, and are like the air we breathe, the water we can procure without effort, without requital, without thanks. The truth that some one man has discovered and uttered, is accessible to all human beings; in the poetical work of art created by some one man all human beings can find emotions for themselves when they thirst for them; the invention, the political and social institution devised by some human brain and realized by some human will, all men find already existing, like the earth upon which they live and move, and the seasons whose changes vary the uniformity of time. What the individual needs and applies to his own use out of these truths and beauties, these inventions and institutions, does not diminish the total amount in the least, it does not injure them nor deprive another of them. He is right therefore in appropriating them without thanks or compensation.

And the man who toils for the masses has no cause

to complain of their ingratitude, when they forget him in what he has accomplished, when his contemporaries and posterity emigrate to the America he has discovered, and do not retain even the remembrance of the Columbus of the new fostering soil. His organism produced its creations as a mother gives birth to a child: because it could not retain them, was obliged to thrust them forth when they had come to maturity. Besides this, each genius really finds his recompense in what he accomplishes; in fact, he is paid in advance for his toil. For he has the benefit of all preceding genius, of all those nameless beings who were the originators of all our civilization and knowledge, of all our conveniences and triumphs over nature. He steps upon the shoulders of his predecessors, and it is only fair that his successors should step upon his shoulders. He feels no other gratitude to the forgotten guides and benefactors of humanity than to appropriate to his own use the treasures they left behind them, and he ought not to expect that his inheritors will be grateful to him in any other way. The intellectual treasures which he finds at his disposal and from which he can draw, have long since ceased to bear the personal signature of their originator, and why should he not console himself with the idea that the treasures he is producing himself, will also become, in time, without any tokens of their origin, the inherited property of mankind in general, and increase the general wealth?

## THE IMPORT OF FICTION.

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What are the reciprocal relations between life and fiction? Is our light literature the result of observation of real life? Or does not real life rather take fiction for its model and endeavor to become like it? Which is the original? Which is the imitation? Do novels and plays take their characters from the streets? Do the masses form themselves after the types portrayed in novels and plays? I can reply to these questions without a moment's hesitation. The effect of fiction upon life is incomparably greater than the reverse. The romancer frequently detaches himself entirely from actual facts and devotes his attention exclusively to the arbitrary play of his imagination. And even when he takes his subject from real life, he does not confine himself to the average facts and truths, which a conscientious observer would deduce from the usual course of every-day life, but selects some exceptional case which may have accidentally fallen under his eyes, or have made an especial impression upon him, owing to some personal, organic cause, and, finally, he does not portray even this exceptional case with fidelity to nature, but transforms it to suit his own characteristics. This is therefore the sole and entire point of contact between real life and fiction. It is less in width than the back of a knife. A flake of foam carried away by some frolicsome gust of wind, shimmering in strange colors, is all that represents the vast and deep ocean of life in romance. If, therefore, life has really enough



influence upon romance to even deserve mention, it is no more than that exerted upon our dreams by realities, which are likewise partially due to some very feeble impressions on the senses, which they transform arbitrarily and immeasurably into ideas the most foreign to the truth. On the other hand, the influence of fiction upon life is enormous. It exerts a powerful and incessant suggestion upon the reader to which the whole of his mental personality and all his thoughts and actions succumb.

Let us consider the conditions of existence among the average masses. The average individual passes his life in the most circumscribed conditions. He does not become acquainted with many persons outside of his own family circle, and seldom or never has he an opportunity to cast a glance into the inner life of another's mind. He knows nothing of the great passions and sentiments, the perplexities and dissensions of mankind, and, from his own intuition, and if restricted to his own personal experience, would hardly surmise that outside of his dining room and his shop, there was another world beyond the church, the market and the city hall. But he reads novels, he attends the theatre, and he sees figures such as have never entered into his actual life: fairy princes and elegant ladies with diamond stars in their hair, adventurers and villains, angelic beings of light and unscrupulous intriguers; he sees strange situations such as have never occurred to him, and learns how the romancer's imaginary figures think, feel and act in these situations. It is inevitable, according to all the laws of psychology, that the individual who is unable to limit or correct the romancer's assertions, which come to him in the form of positive affirmations, will believe them without a shade of distrust, and obtain his ideas of life from the romancer's works, take the latter's fictionary beings for his models, and adopt

his judgments, his likes and dislikes. Like all kinds of suggestion, that exerted by novels and plays has more effect upon those individuals who are mentally less developed or less healthy, than upon those who are more powerful, original or entirely normal in every respect; above all, upon the stereotyped natures, young people, women, hysterical persons and those with weak minds or nerves. This has come under my direct observation in Paris for many years. The *Parisienne* is completely the work of the French journalists and novelists. They make her literally just what they want her to be, both physically and mentally. She talks, she thinks, she feels, she acts, she even dresses, carries herself, walks and stands just as the fashionable writers of the day decree that she should. She is a puppet in their hands and involuntarily obeys all their directions. Some depraved fellow with a repulsively corrupt taste describes his ideal of woman in some newspaper or book, just as he has hatched it in the foul atmosphere of his degenerate imagination: with tripping gait, her voice a falsetto like a child's, her eyes wide open, and her little finger crooked while she is eating, so that it rises in the air above the rest. All his feminine readers begin at once to realize this ideal and we see only little mimics around us, tripping along with tiny steps, piping in a shrill little voice, drawing up their eyebrows to the middle of their foreheads, spreading their little finger away from the rest of their hand as if it had the cramp, and making themselves unspeakably disgusting to every healthy taste with all this imitation of childlike artlessness. At the same time this is not even conscious and intentional affectation, but automatic habit that has become second nature. Some other satyr of the pen whose dull senses are tickled into wakefulness by some other idea than that of a female creature in infancy, revels in the description of the small

locks of hair that curl at the back of the neck in many women; he speaks of them in the insolently caressing terms that are used to designate the pleasures of the senses, and surrounds them with subtly flattering expressions that are as shameless as certain looks and touches. Without a moment's delay his fair readers comb their hair high on the back of their head, and arrange it in bangs and stiff little corkscrews, and parade with a collar very low in the back, which gives them a deceptive resemblance to a condor or a vulture, and all for the sole purpose of looking like the woman whom the poet has portrayed to them as being especially adapted to erotically excite a man, who, by the way, is steeped in vice through and through—which fact, however, he does not mention. The case is the same with us in Germany. Every one who does not lose his senses in the presence of woman to such an extent that his judgment is paralyzed and his contemplation becomes a worship, knows how whole generations of German girls and women have formed themselves upon the model of Claurens' female figures, as now upon the Gold Elsie's and Geierwally's of recent fiction. Fortunately the creators of Gold Elsie's and Geierwally's are not corrupt poisoners of the popular mind, and the figures which they hold up as models to their readers are at least morally free from reproach even if they are false to nature, untrue and contrary to good taste. Man is less affected than woman by the operation of this novelistic and theatrical suggestion, principally for the reason, that he does not read so much light literature as the latter, but at the same time he does not entirely escape it. When the "Sorrows of Werther" first appeared, Germany was soon swarming with Werthers who did not merely pretend to think and feel like their model, but really acted like him, and proved their sincerity in many cases by committing suicide, which is a point that mere

affectation surely would not have attained. In France, Antony, the victim of love and fate, produced a whole tribe of Antony's, and Byron is responsible for the fact that in the thirties the whole civilized world was alive with demoniacal young men with pale cheeks, long hair, wide collars, lowering brows and terrifically mysterious glances. Thus the poets and novelists stand like the Jacob of the Bible before the watering-trough and set their "rods of green poplar and of the hazel and chestnut tree," in which they have "pilled white strakes" in the gutters, and cause "ringstraked, speckled and spotted" generations to be brought forth as they may choose.

There would be no further misfortune in this if our *belles-lettres* held up none but normal and correct models before the masses. But they do not do this. The literature of fiction contains nothing but impossibilities, improbabilities and anomalies, with so few exceptions that they can not be taken into account. The cases which it describes are exceptional cases, such as never or exceedingly rarely occur; the beings it portrays belong to an infinitesimal minority, if it is at all possible to imagine them as actually existing in flesh and blood; the ideas, the sentiments, the actions it depicts, are morbidly exaggerated in one direction or the other, and very different from those of the typical average human being, well-balanced both mentally and morally. The literature of fiction is an enormous collection of tales of disease, of which some have been conscientiously observed, while by far the largest majority have been begotten by a hideous or ignorant imagination, an endless catalogue of all the ills that flesh is heir to, from the slight obscuration of the judgment by some unreasoning passion, to the most monstrous moral degeneracy.

Even the newspapers have this character of seeking

after the exceptional and the morbid. The news which they relate to their readers are about murders and homicides, fires, railroad accidents, inundations, earthquakes, all events which hardly one man in a hundred in civilized countries ever sees with his own eyes in the whole course of his life. And this is natural, too. A normal life does not seem to contain anything worth relating, according to our inherited point of view. That Uncle Hinz slept well, enjoyed his cup of coffee at breakfast, waited on his customers all the morning and ate his dinner with a good appetite, all as usual, does not seem to offer any topic for the news of the day. That alone is chronicled which differs from the usual standard, and this is precisely the exception, the morbid case. If, therefore, some wise citizen of Thebes to whom the newspaper would be a hitherto unknown institution, were to appear among us, and pick up a daily paper, he would certainly inquire: "My noble host, has the world and humanity grown so wicked that nothing occurs now but crimes? Are the gods so angry with men that they inflict all misfortunes upon them? Are all peoples clamoring to make war upon all others?" The exchange and market reports and the advertisements would be all that would calm his perturbed mind to any degree, and reveal to him that besides the horrors and excitements there was an every-day life calmly peaceful and regular going on all the while.

Novels and plays in their higher forms have the same propensity as the newspapers. They devote themselves exclusively to exceptions and exaggerations. The offal of fiction crudely portrays external incidents of an unusual character, such as adventures, remarkable accidents and crimes, while the more pretentious literature describes extraordinary human beings, and soul-conditions of an exceptional nature. The author writing for the reader of

a less cultivated mind, gives him at best voyages of discovery, marvellous adventures among robbers and pirates, wars and shipwrecks, in his blood and thunder stories of the sensational style; the one writing for the reader of a more cultivated taste serves up all kinds of passions and inward conflicts, such as we are not accustomed to encounter on the street; but it is always something differing from the usual human lot that forms the subject of the work of fiction. It is true there is this difference, that the original romancers only digress from the truth in so far as they exaggerate or are arbitrary in the selection of their premises, from which, however, they deduce correct conclusions, while the mediocre or imitators, in their efforts to represent nature do not put more expression into the lines as they draw them, nor more intensity into the coloring, but sketch imperfectly and apply the paint without taste or discrimination. However, the romancer has never the right to say to the majority of his readers, and not even to one laboriously searched for with Diogenes' lantern, the significant "Tat twam asi!" "This is thou!" of the Indian sage. How many books are there which could say with the Roman of old to any healthy, normally developed being: "Of thee is the story told." Let us examine into this matter together,—Every German, perhaps every man who has attained to any of the higher grades of culture, has something of Faust in him, his craving for truth and knowledge, his gnawing sense of his finiteness, but how many of us feel this craving to that tormenting extent that we seek to appease it with the contents of the "clear, crystal cup?" Most girls feel like Juliet during a certain portion of their lives; but only very few carry the eccentricity of their love for Romeo to such an extent that they repair to the old Crypt and seek a tomb in the vault. There are plenty of jealous men, and unfortunately many

of them have more cause for their torments and suspicions than Othello. But yet they do not smother their Desdemonas, not even when they belong to the vanishing minority of generals and governors. As far as my experience goes, I have never known but one man in actual life, who even made the attempt to carry Shakespeare's suggestion into execution. But the whole story was lamentably spoiled by the fact that the Othello was a porter in a wholesale coffee house, and found his courage for the act in a glass of whiskey, and then upon his arrest when the deed was only half completed, pretended to remember nothing about it. At the same time, the poetic creations mentioned as illustrations above, are the most universally true and the most universally human of all in the literature of the world. If we descend to a lower grade, the matter becomes far worse. The three gay musketeers never did live, and they could not lead their existence of unbridled love, gambling and fighting even for a single week in our present civilization, without having all the policemen of the district at their heels. Not one out of a million readers will ever be exposed to the possibility of becoming a Robinson Crusoe, and the honest Friday is incomparably less to us than Hecuba to the actors. But is there no such thing as a fiction that is the mirror of reality, perfectly true to human nature in general? I reply in good faith: I see nothing of the kind. Even "Hermann and Dorothea," that simple, faithful picture of every-day life in a little German town, is not true to nature, in so far as it is based upon premises which are only verified in the course of centuries. Seldom or never do we see whole communities forsake their homes with kith and kin, bag and baggage, and go wandering around through the country, thus affording Hermann the opportunity to find Dorothea at the well, as in the days of the patriarchs, and

to conduct his bride as a servant to his father's house. All the beings who ramble about in the novels and on the stage, are people from the moon, side-show marvels, with a horn in their forehead, bearded women, wizards, giants and dwarfs, they drag along a peculiar fate, which is worth being exhibited to the gaping crowd at ten cents admission fee; they have some valuable secret basted into the lining of their coats, they are a whole yard deeper inside than outside; the ordinary, tranquil, peaceable crowds of human beings who are neither especially good nor especially bad, who support themselves honestly and leave a will when they die, if they have anything to bequeathe, and upon whose busy life the sun shines all over the broad earth, these human beings are not the ones that fiction portrays.

I hope no one will cast "naturalism" in my teeth, claimed by a few modern French writers as their brand-new invention. I know of course that it vaunts itself upon portraying only the naked truth in regard to life, and to be working from "human documents" alone, that is, from facts observed. But it is all a contemptible fraud, and the rankest kind of a device to deceive the unsophisticated. Those authors who speculate in naturalism, do exactly the same thing as I once saw a local photographer do in a little town in Hesse. He had in his possession a large collection of old card photographs which he had once bought at an auction at Frankfort for a trifle. Whenever any person was brought into prominence by any of the events of the day, he would select some picture from his stock which corresponded to his idea of the new celebrity, and offer it for sale as the portrait of the person in question. He thus sold in 1878 a Disraeli with a bottle nose that proclaimed strong alcoholic propensities, and four years later, a Gambetta with a venerable, patriarchal beard and

a Russian fur cap on his head. His way of doing business was not discovered until he exhibited over the name of Garfield the photograph of a man, entirely unknown to him, but known and recognized by the whole town as the deceased tax collector. The authors of the naturalistic school have inherited the old methods from their predecessors of the last three thousand years; but because the spirit of the times happens to be earnest, scientific, cogitatorial, at present, because the public pretends and perhaps even believes itself, that it is interested solely in established facts and scientific experiments, they give their methods such fashionable names as naturalism, experimental fiction, human documents, etc. One of Zola's novels is exactly like one of Sue's novels, or Prevost's, or Scarron's—an independently invented story which never occurred anywhere except in the imagination of the author. If one author likes to wade in the mire while another prefers some cleaner place, if one likes to portray drunkards, prostitutes and imbeciles, and the other rich, aristocratic and estimable model citizens, it is simply a matter of personal peculiarity, and does not alter anything in the method. The naturalistic school is therefore no more real life, no more actual nature, than the idealistic or conventional school, as all statistics prove the fact that even in the wickedest cities there is hardly one Nana to a hundred inhabitants, and one Assommoir in fifty buildings, that the Nanas and Assommoirs are unknown and exceptional cases to the vast majority, and hence are of no practical importance, even if they do actually exist, even if they are described without exaggeration and arbitrary adaptation—which fact, by the way, it is impossible to concede, and consequently, they can not be considered valuable for anything more than to be a freak of nature in some pathological museum, and not adapted in any way to be a "human document."

Why then is it that all fiction, the naturalistic as well as all other kinds, devotes itself exclusively to the portrayal of exceptional and morbid cases? One reason, already indicated above, is in the reader. The public does not want to find what it knows already, reproduced in a book. It is on the lookout for sensations, and these are only produced by the transition from an existent into a new state of the consciousness, the cessation of one and the commencement of another, different impression. The circumstances in which we live ordinarily are so familiar to our senses and our consciousness, that we no longer perceive them, just as we fail to perceive the pressure of the atmosphere which is perpetually upon us. To stimulate the consciousness to activity the author must therefore describe different and hitherto unfamiliar circumstances and people to the public, and these he can only find, as a matter of course, outside of what is ordinary, outside of the majority and the average type. The second reason is not in the reader, but in the author. At the present day, and indeed for the last hundred years, the author of novels and plays is either the child of or the life-long dweller in a city and under the direct influence of its mental and moral atmosphere. He lives among nervously excited and in many cases morbidly degenerate individuals. We must not forget that the inhabitant of a city represents a type of humanity destined to decay. Every family of dwellers in cities dies out in the third or, at the latest, in the fourth generation, if its blood is not renewed and vigor imparted to it by recruits from the country. Nervous aberrations are of especial frequency among this class of people. Countless numbers of individuals are hovering there on that borderland between a sound mind and insanity, which has recently become so fascinating to specialists and psychologists. They are not really deranged nor are they any



longer entirely sound. Their brain centres do not work as they ought to. One will be debilitated and degenerate, another excessively susceptible and unnaturally predominant. They feel, they think and act differently from healthy and vigorous human beings. Slight contacts arouse tempests in them; their sensations become passions over which their judgment has no control; they are emotional and impulsive, morbidly exaggerated in both love and hatred, their ideas abound in eccentricities, and they are inconsistent in all they do and leave undone. This is the class of beings which the author, residing in a city, sees constantly around him, which he studies, to which, in most cases, he belongs himself. It is obvious that the life in common of natures of this kind must produce problems such as would never arise in the lives of normal human beings. The conditions of attraction and repulsion, the inward and external conflicts, the complications and the catastrophes are entirely different from those that occur to people in normal conditions, in whose lives the sunshine and the rippling of the brook in the meadow, the shade of the mountain forest and the free winds of the plain, in short, all the workings and influences of nature, are constantly performing the office of a perpetual regulator. Surrounded by these crowds of ultra sensitive or obtuse, nervous or hysterical, sentimental or corrupt, abnormal human beings, who are half geniuses and half idiots, who spend their lives tottering between the yawning jaws of the insane asylum and the criminal court, the poet of the great city loses his grasp of the truths of humanity, and at last ceases entirely to know how the world is reflected in a clear, unobscured eye and in a brain neither ultra excited nor degenerate. And thus these Zola stories of hereditary morbid mental conditions come to be written, thus these Ibsen "ghosts," and all these crazy novels of love, jealousy and

crime, which are as foreign and incomprehensible to a vigorous and sound constitution as the headaches and dyspepsia of chlorotic invalids.

And the picture of such unlovely passions, eccentricities and unbalanced states of the reason and morals is exhibited to the reader, and works as suggestion upon him; it serves him as an *orbis pictus*, from which he learns to know the world and humanity, and as a model, upon which he forms himself! And, what is to be done to prevent it? The authors of the light literature of former centuries, who did not live in cities, and who were not subject to nervous complaints, supplied their public with the stimulants they required, in the form of coarse absurdities, adventures of travel, hunting and war, or of acknowledged fairy tales, which none but a poor fool like Don Quixote could take in earnest. Our contemporaries have become too precocious for such reading matter, and Indians, Africans and enchanted princesses now captivate none but children less than twelve years old. I can see no remedy for this contamination of the reader's imagination by the corrupt matter of our polite literature, unless the government decides to forbid a residence in cities to all authors of novels and plays, and banishes them to peaceful villages and the society of sturdy country people, or unless we can persuade our professional authors to portray to the people average facts established by statistics, instead of rare, exceptional cases, and to discuss mental physiology, instead of mental pathology, and to write a book about healthy instead of diseased persons.

I am only afraid, I am very much afraid, that this useful book, so highly to be recommended in every respect, would never find either a publisher or a reader.

## THE NATURAL HISTORY OF LOVE

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What has the suggestion exerted by the literature of fiction made of that sentiment, the most important of all to the preservation of the race, what has it made of love? No other human instinct has been to such an extent so over-refined, so diverted from its true course, and trained to such morbid, false ideals, no other psychical phenomenon has been so misinterpreted and so systematically rendered unintelligible, as love.

This has been carried to such an extent that it requires serious consideration before one can proceed to the investigation of love, of the way in which it originates, its purpose, its course and the states of the consciousness with which it is associated, with sober earnestness and scientific impartiality. All the emotional giddy-pates of both sexes, whose empty heads have been turned by light literature, their only intellectual food, cry murder, and demand that the profane analyst be stoned to death. The indignation against him knows no bounds. He is a heartless cynic, a morally decrepit being, to whom nature has denied the sublimest of all sensations. He is a villain who is sinning against the majesty of womanhood, and an infamous wretch who has sacrilegiously forced his way into love's Holy of Holies. This has been said of Schopenhauer, and his successor, E. v. Hartmann; this is what

would be said by the "*Veilchenfresser*" of Darwin, Spencer and Bain, if they ever read or could understand these great minds. Love is not a subject for impartial discussion, but only for rapturous verse. One must not approach it as a critic, but as a lover only. By permission: it is a request that can not be granted. I can talk of hunger, without being hungry, of fear, without being afraid. I am allowed to dissect and describe these phenomena in cold blood, without giving any one the right to accuse me of being incapable of doing justice to a well-spread table, or of experiencing the excitement which is caused in man by the realization of a great danger, overwhelmingly superior to all his means of defence. Why should not the subject of love be also open to impartial criticism, without giving cause for the immediate assertion that the critic is incapable of experiencing love, and consequently of comprehending it? The worst conditions imaginable for the investigation of hunger or of fear, would be those very sensations. We can not expect a hungry man to determine with any accuracy or method the effect of the idea of a roast of beef upon his nervous system, especially when it is sending up its fragrance on the platter before him, and a man who is afraid acts like a person of discretion when his only thought is of running away, and not of self-analysis. In the same way a person in love is the very last one whom we ought to expect to enlighten us in regard to the mental processes occurring during the period of love. This can only be done by the dispassionate observer. And there is no cause for him to fall on his knees, cast up his eyes and delude himself into a poetic ecstasy or frenzy, whenever he speaks of love. For the very reason that it is the most intense and the most important to humanity of all its sentiments, it ought to be considered with a brain all the clearer, and everything like excitement and enthusiasm,

the language of signs and of flowers, most carefully avoided, as unless this is done the actual facts can neither be observed nor described with any accuracy.

For the whole substance of love is composed of perfectly natural elements, even if those in love do not like to acknowledge this fact. The human brain contains a supreme sex centre, upon which some lower centres in the spinal cord are dependent, and which in return is influenced by the action of the latter. In the prime of life, during which the reproducing system of the individual is in complete maturity, and the seat of animated processes of growth, the sex centre in the brain is also in a condition of tension and susceptibility, which makes it very sensitive to all causes of excitement. In emotional natures and in those in which the mind is unoccupied, it exerts a predominant and frequently a sovereign control over the entire consciousness. It affects the judgment, the imagination, and the will, it awakens ideas of erotic origin, and turns all the energy of the brain into a certain channel, thus affecting the entire brain as a sex polarity, if such an expression is permissible. This state of the mind is experienced subjectively by the individual as an impulse or a craving to love. All that is now necessary for this impulse and this craving to find an object and become transformed into actual love, is for the individual in this frame of mind, to meet another of the opposite sex in the same condition. In this case all the vital activity of the brain to which it is excited by the sex centre, revolves around the loved being, who is not regarded and judged according to what he or she really is, but according to the way in which the one loved corresponds to the organic requirements of the one loving. The former is merely a puppet which the latter dresses and drapes to suit his or her personal taste.

Every normal human being has an instinctive, unconscious perception of the qualities which must be possessed by the individual of the opposite sex to ensure in a union with the latter the perpetuation and improvement of his own qualities in his offspring. The more highly cultivated, the more original, the more differentiated an individual, the more complex the qualities which he attributes to the longed-for and expected individual of the opposite sex. If he has his choice among a number of individuals, he selects with infallible certainty, the one that comes the nearest to the ideal, which attains organic perfection in him when he first comes to maturity. If he has no choice he accepts any individual as it happens, with perfect content, if the latter is not so entirely different from and opposed to his ideal, that his sex centre is not affected in the least, and experiences no more affinity nor emotion in the presence of the latter than if it were an individual of his own sex, an animal or an inanimate object.

The closer the resemblance between one individual and the organic ideal of another, the more rapidly of course the work of identifying him with the organic ideal proceeds; if the two exactly coincide, then the thunderbolt falls, the individual falls in love on the spot, in an instant, and has the feeling that he has always known and loved the object of his choice; if there are certain differences, the individual has first to perform the task of adapting, balancing and accustoming himself to the new conditions, and learning to disregard the discrepancies between the other individual and his ideal, and seek to connect the two in his mind as closely as possible; in such a case one falls in love gradually, more rapidly or more slowly according as the object of his love can be more rapidly or more slowly adapted to the pre-existent organic ideal. In all cases the individual in love does not love another human

being, but an ideal, which has been evolved by his own organism; the impulse to love is the seeking for an embodiment of this inward ideal in corporate form; love, the persuading of one's self that this embodiment has been found; the beloved being, the projection of the inward ideal into the outer world. The love-life of an individual therefore begins when his sex centre comes to maturity, and lasts as long as the latter is in its prime; the ideal is then organically evolved and continues vital throughout the whole period of pubescence; whether it is ever realized or not is another matter; it is existing and waiting for its opportunity to make its appearance in an incarnate form; the individual is virtually, or potentially if not actually, in love during all this time; he is in love with his ideal, if not with any particular person. The lower and simpler the ideal, the easier is it for the individual to find the realization of it in corporate form. Hence common and simple natures fall in love very easily, and find no difficulty in replacing the object of their love by another; while delicate and complex natures find it a long and tedious task to discover their ideal or anything approximating it, in real life, and in giving it a successor if they happen to lose it.

Wooing affects the sex centre as a powerful cause of excitement, and the individual who is the object of it, can easily fall into error and lose the assurance of his intuitive perception of what is organically necessary to him for the perpetuation and improvement of his qualities in his offspring, misled by the influence of the excited state of his sex centre; but this mistaken idea does not survive the wooing which was the instigating cause of the excitement. The realization of the fact that he has made this mistake, produces in him a feeling of confusion and mortification, which turns in time into hatred of the

individual who was the cause of it, and is one of the most acutely disagreeable sensations to which human beings are liable.

Normal and natural love is always conscious of its purpose. It is the consciousness of incompleteness, the longing for the possession of what is needed to supplement the individual, physically, morally and mentally, to form the perfect whole, the source of new life. In powerful individuals, love issues will-impulses strong enough to conquer all opposing wills and overcome every obstacle. In individuals of feeble wills it is not capable of this; the emotion is and remains subjective, and does not convert itself into actions. We must therefore not measure the strength of the love of human beings by the efforts they make to attain to the beloved being, as the intensity of these efforts depends upon the strength of their will and not upon the strength of their love. But I must add in limitation of this idea that in all healthy and normal persons all the brain centres are developed about equally, so that those individuals whose wills are weak, will hardly have very powerful sex centres, while those who are capable of experiencing violent love will also have powerful wills, as a general thing.

The different importance of the two sexes in the preservation of the race makes corresponding differences in their love life imperative. The rôle assigned to woman is incomparably more important; she is obliged to supply the entire substance for the formation of a new being, to form it complete in her own organism, and impress her own qualities upon it, as she inherited them from her ancestors; man's share in this tedious and difficult, even heroic task, is merely to supply the impulse; the nature of the task, however, being directly dependent upon the nature of the impulse, to a certain degree, as, for example,

the same dynamite will burn harmlessly or blaze up brightly, or explode with terrific force, according as it is set on fire with a live coal, a lighted match, or some other explosive. Consequently the sex centre in woman is more highly developed, its activity is more animated and more important in the total of the brain's activity; woman has a more distinctly evolved ideal of the man she organically needs to complete her, and she is less easily induced to relinquish this ideal, and resign herself to some other entirely different substitute; when she has once found her ideal, it is almost impossible for her to renounce it, and the emotion in which the excited state of her sex centre manifests itself, crowds all its other contents out of her consciousness, so that she can do nothing but love, and place her will, her judgment and her imagination at the service of her love, to such an extent that she will not allow the slightest attempt on the part of her judgment to subdue this emotion with rational ideas. Woman feels, instinctively, that she must not make a mistake, and is unconsciously aware of the fact that a mistake would entail irreparable consequences upon her and upon the race, and that it would lead to an unreasonable amount of unprofitable organic exertion, and is consequently extremely distrustful and afraid of the slightest possibility of a mistake; on the other hand, she realizes the fact with corresponding certainty when she has found the right one, and, in this case, is more willing to give up life itself than the man she loves. The circumstances are different where man is concerned. It is allowable for him to make a mistake, as a mistake does not entail any organic consequences upon him, as far as his share in the preservation of the race is concerned. Hence his ideal of the woman he organically needs to complete him is prefigured in his mind with less distinctness; hence he is apt to fall in love more rapidly

and easily with the first woman he happens to meet; he is, for this reason, much less constant; hence also, he can love much oftener, renounce much easier and forget with much less difficulty; for this reason, also, the activity of the sex centre assumes by no means so large a proportion in the total of his brain's combined activity, and hence, his love can be proportionately more easily controlled, subdued and even entirely vanquished by his judgment.

This is in hasty and general outlines, the natural history of love as it occurs in perfectly healthy and normal individuals of both sexes. But does this simple, true, harmonious love ever occur in those circles whose mental aliment is the light literature of the day? I doubt it very seriously. What is regarded as love and accepted as love, in those circles, are only imitations of morbid and false conditions, to the representation of which fiction and the stage devote their entire attention.

Disorders and affections of the sex centre are of the most frequent occurrence among highly civilized people. A race that is deteriorating is first affected in this source of future generations. The debility, exhaustion and degeneracy of the individual as well as of the people and the race, first manifest themselves in anomalies in the workings of the sex centre, so that love becomes unnatural in its character, its energy and in the selection of its object. Whenever there is any disorder in the nervous system it is echoed by the sex centre, which is constantly striving to rule supreme over the entire activity of the organism, even in a condition of perfect health, and to apply it to the furtherance of its own interests, but is withheld from this usurpation by the opposition of the other centres, while it has its own way unresisted in an enfeebled or unbalanced brain, and fills the consciousness exclusively with its own



excited states, making a slave of the whole organism and planting its standard of victory on the ruins of the reason and judgment, this standard being now a petticoat, now a fool's cap, and anon a banner of a procession or the scourge of the penitent sinner. Fiction, and especially the fiction of the day, portrays exclusively these morbid forms of love. The reason for this fact was alluded to in the preceding chapter. The authors have either ultra-sensitive nerves themselves, or else live in the midst of metropolitan types, in whom they are unable to observe any other manifestations than those of disturbed and unbalanced organisms. If all the characters in fiction are not precisely the victims of pronounced love-insanity, yet they are one and all dwelling on that border-land between perfect health and mental unsoundness mentioned in the last chapter. The specialist in brain diseases recognizes in the description of the mental states and actions of those in love, as portrayed in our polite literature, the indications of certain kinds of mental disorders with which he is very familiar. As a usual thing, the graver symptoms are only casually indicated; if however, they were but slightly increased, they would prove to be classical examples of erotic mania, of ecstatic delirium, religious frenzy and other mental maladies to which we could not properly refer in the presence of the unprofessional. A reader of sound judgment and particularly one of professional education, imagines himself in a clinical hospital when looking about himself in fiction. Nothing but patients and invalids! Here is an individual who loses his senses at the sight of a woman, becomes deprived of his reason and does the most idiotic things; here is another who is transported into a dangerous condition of turbulent or silent ecstasy by a glove or a flower belonging to the beloved being; in one case, love impels the lover to criminal actions, in another to melan-

choly and moroseness; at one time we see a suspicious alternation of capricious coldness and sudden tenderness, and again the bankruptcy of a whole character and mind, until the will is reduced to the most pitiable condition of impotency, under the influence of the passion. And all these freaks and oddities, these ecstasies and renunciations, these raptures and yearnings, these impotent longings and absurd violence, are exhibited as the regular and natural manifestations of love, without a word of warning, without the slightest notice to the effect that the subjects treated are morbid exceptions!

Reading matter like this produces a profound and extremely injurious effect upon the average reader, and especially upon those inclined to nervousness, and whose minds are unbalanced to a greater or less extent, but above all, upon the city woman. Woman from her very nature has a tendency to regard love as the chief and sole purpose and substance of human life, and she is completely confirmed in this idea—in which she may be right as far as she herself is concerned, but which, however, does not apply to man—when she sees that the books from which she obtains all her knowledge of the world and of life, turn upon nothing but love from the very first to the very last line. The portrayal of the contest for a woman and of the transports when the victory is won, exalts her natural appreciation of herself into a perfect insanity in regard to her powers of fascination, and she deifies herself until she actually believes that the gift of her heart is a super-terrestrial boon, which it is far beyond man's power to requite even with the renunciation of all the other tasks and aims of his existence. She learns to estimate man solely according to his capacity for loving; the wretched weakling whose imbecile brain is unable to oppose any resistance to his emotions of love, tossed hither and yon without

mast or rudder on the sea of passion, she considers touching and love-inspiring; the strong and healthy man, whose cogitation holds his emotion in check, who retains control of his reason even in the excitement of love, and only yields to its promptings in so far as they are approved by his judgment, she detests as cold and heartless. She calls melting softness and whining ultra-sensitiveness, devotion; while unyielding strength, versed in self-control, with a proud appreciation of the value of the affection offered as well as of the affection received, is in her eyes revolting rudeness. The morbid state of degeneracy which renders a man woman's plaything and the victim of his own temperament, is in her eyes the token of real manhood, and her imagination paints the true lover with the external symptoms of pale cheeks, languishing glances and dreamy brow, all traits which are not among the attributes of sound and perfect manhood. She imagines that love, to be deep and genuine, must assume an exaggerated form; she expects mental and physical gymnastic feats, nonsensical effusions in prose and verse, sighs, tears and clasped hands, incomprehensible mysticism in words, ideas which would never occur to any rational human being, and deeds in imitation of Orlando Furioso or of Amadis de Gaul. To be recognized as genuine, love must prance and parade; a silent, self-contained sentiment that neither gushes nor gesticulates, that has no appreciable influence upon one's desire to eat and sleep, and is compatible with the fulfillment of the duties of one's vocation—this is not considered love. It is only recognized in the form of a tempest; it must appear with thunder and lightning; the lover must rush to his loved one as Zeus to Semele; if he makes his appearance in any other way he is not the expected god.

And this is not all. Fiction disturbs also the natural course of the development of the sentiment of love in the

youthful reader, and especially in the girl-reader. The rule is for the sex centre to commence its activity as the organism attains its maturity, thus arousing ideas and emotions of an erotic nature in the consciousness. But among the youth of the upper classes, the reverse occurs. Erotic ideas and emotions are artificially forced upon the consciousness by what is read, and excite the sex centre to premature and therefore injurious activity. If the instinct to love is a result of the attaining to maturity of the individual, the organism has had the time and the strength to instinctively evolve the ideal of the mate it feels it requires to complete it, the sentiment becomes assured and reliable, the influence of fancy restricted and the danger of error in the decisive choice materially lessened. But, on the other hand, if erotic ideas are prematurely impressed upon the consciousness by what is read, then the organism is taken by surprise, before it is yet able to evolve its ideal of a mate; the foreign suggestion disturbs this delicate task; the organism ceases to listen to its own indistinct voices, and hears none but those of fiction; the imagination does not receive the idea of the longed-for individual from the mysterious depths of the cells and tissues, but from the pages of novels; the individual does not attain to the true perception of the needed companion, and any chance encounter may prove fatal, owing to the lack of the inward standard. The fair novel-reader and theatre-goer does not know whether the man who interests her is the right one or not, because she has no organically evolved ideal, and only memories of heroes in romance and drama for her criterions. She substitutes her fancies for the real needs of her organism, and heedlessly commits those fatal errors in her choice which wreck her life for ever after.

In ninety-nine cases out of a hundred among the cultivated classes, and especially among the inhabitants of

the larger cities, what is considered love or what is pretended to be love, is not a love evolved in the organism, but merely the effect of the suggestion exerted by fiction. If lovers of this class had never read a novel nor seen a sentimental play, they would probably not be in that state which they recognize as love in themselves, or if they were really in love, this sentiment would manifest itself in entirely different thoughts, words and actions from what it now does. They do not love with their sex centre but with their memory. Consciously or unconsciously they are enacting a rôle in some society drama, and earnestly and zealously play the scenes which, as portrayed in books or represented on the stage, have taken possession of their imagination. It is a custom in Paris with loving couples, in the honeymoon of their young love, to make a pilgrimage to the tomb of Abelard and Heloise—that celebrated and unfortunate pair of olden times. There is a deep significance in this proceeding. For it is extremely probable that the two lovers each owe the infatuation which they are experiencing, to the dead minstrels of love of the twelfth century, or, in other words, to the stories of love which have been sung to them by the poets of all ages to the accompaniment of the strains of the harp. The man with whom a woman who has read much is in love, need not pride himself upon this fact. What she really loves is not him personally nor her organic ideal, which he may resemble, but the figure in romance, invented by some author, for which she is seeking some one to represent it. Let us beat our breasts, my brethren! However humiliating this may be to our pride, we must still all acknowledge the fact that in our love affairs we have all been more or less the weaver with the ass's head in the Midsummer Night's Dream, of whom Titania was enamored because she was under the spell of the magic flower. The Oberon

who has dropped the juice of the magic herb upon the eyelids of our Titanias, is the romancer alone. It was simply our good fortune that we happened to cross the path of Titania just when she was under this influence. But whether it is Bottom or Quince, Titania is most certainly not in love with either one or the other, but with some romantic figure suggested to her by some roguish Oberon, as Faust, after drinking the magic potion, saw an ideal Helen in every woman he met.

A certain indescribable fascination, style or *chic* has been ascribed to the *Parisienne* by several generations of authors of all nationalities, all writing in the same stereotyped fashion. The consequences are that the mouth of every simpleton waters, and his eyes twinkle when the mere name of a *Parisienne* is mentioned, and especially when he sees one in flesh and blood before him. If you ask the idiot what he sees in her, he is content to bellow forth the same single word: "chic! chic!" He sees in the *Parisienne* what his books have convinced him is there for him to see. Our literature has been the trumpet of the praises of actresses and circus riders in the same way—no other term will express it,—and consequently these persons are the objects, *par excellence*, of the frantic adoration of all our cadets, students and esthetic counter jumpers." In the same way fiction has suggested the military officer to woman, at least in Germany, as the object most worthy of love, and the brass buttons might well hang a votive wreath in the temple of the muses of fiction, as often as a feminine heart succumbs to their fascination.

If we study the love affairs of which we see the origin, the growth and the culmination in a happy marriage or in some obtrusively *eclatant* catastrophe in the society around us, we will find that as a rule, the affair proceeds accord-

ing to this general plan: a gentleman pays particular attention to some one young lady, as is obligatory upon him by sitting next to her at table or by the exigencies of the dance. The lady then experiences a certain sense of satisfaction at the effect—usually very much exaggerated—produced by her person, and her vanity thus flattered disposes her to an amiable and responsive frame of mind, which in turn is misinterpreted by the gentleman's self-love. At this point the work of chance comes to an end, and the suggestion of fiction begins to make itself felt. Both he and she have experienced a slight impulse of attraction, the imagination perfects it, the memory invokes all the images of famous lovers, all the poems, love-letters and confessions of love which they have read bestir themselves and start to the pen and to the lips, they become more and more inspired, more and more impassioned in the erotic rôles they have commenced to play, and finally they appear before the altar, where invisible to all, a crowd of authors of fiction extend their hands in benediction upon the heads of the wedded pair, whom they alone have brought together. Afterwards it only too frequently becomes evident that Thecla has entrusted the rôle of her Max to some one entirely incompetent to fill it, or the reverse, and then another drama is played, which is also the work of the suggestion of some poet—perhaps one of crime and divorce, perhaps of separation or a convent romance. But the whole matter is almost always a phonographic love, in which the male and female faithfully repeat in their metallic Punch and Judy voices, the words spoken into them, as into Edison's ingenious instrument, by the romancers beforehand.

Ye over-refiners of love, ye quintessencers of passion and pathologists of the human heart, ye fabricators of ambiguous situations, exceptional human beings with double-

barrelled souls, and of unheard-of incidents, what have ye made of the simplest, the truest and the most delightful human instinct? how terribly have ye sinned against us all!

## EVOLUTION IN AESTHETICS.

Herbert Spencer says in his "Principles of Biology," (Vol. II, page 253, English and American editions): "This seems as fit a place as any for noting the fact, that the greater part of what we call beauty in the organic world, is in some way dependent on the sexual relation. It is not only so with the colours and odours of flowers. It is so, too, with the brilliant plumage of birds, and with the songs of birds, both of which, in Mr. Darwin's view, are due to sexual selection; and it is probable that the colours of the more conspicuous insects are in part similarly determined. The remarkable circumstance is, that these characteristics, which have originated by furthering the production of the best offspring, while they are naturally those which render the organisms possessing them attractive to one another, directly or indirectly, should also be those which are so generally attractive to us—those without which the fields and woods would lose half their charm. It is interesting, too, to observe how the conception of human beauty is in a considerable degree thus originated. And the trite observation that the element of beauty which grows out of the sexual relation is so predominant in æsthetic products—in music, in the drama, in fiction, in poetry—gains a new meaning when we see how deep down in organic nature this connexion extends."

These few lines contain all three, and in fact, all nine

of the Sibylline books of natural æsthetics—the science which treats of the beautiful in nature and art.

The human mind and even the mind of the masses will gradually become accustomed to thinking in accordance with the principles of evolution, that is, to recognize in each phenomenon an episode of development, incomprehensible in itself, but which is made clear and intelligible by what has preceded it, and appears much less mysterious when viewed by the light of the past than when considered alone by itself. When the intellect of man has attained to this point of view, few things will seem so absurd to it, as the ideas and attempts at explanation which constitute the whole of the science of æsthetics as professionally taught at the present day.

For mental philosophy, up to the present time, has, with few exceptions, constantly disregarded the principles of evolution. It accepted the psychical phenomena just as they appear now to our observation, and sought to comprehend them as they now exist, without inquiring how they originated; nor from what simple beginnings they have been evolved into their present complex state, nor what elements in them are superannuated survivals or dead remains, and which are vital impulses.

Even Kant abandons his usual habit of keen and lucid thought, when he is speaking of the categories (the scientific term applied to the classified enumeration of all things capable of being named), and makes the mystical statement that the categories are forms of human thought which indicate something outside of and beyond humanity. In more intelligible language, this means simply that the forms of human thought, such as time, space and causality, are not the result of the experience of the individual, that is, of what his senses have perceived, and must therefore have attained to his consciousness in some other way than



by means of his senses, that is, they must have been born in him. And he said this long after Hume had discovered the explanation of at least one of these categories: causality, which he asserted proceeded simply from the fact, that the human intellect had always seen one phenomenon succeed another, and gradually assumed the habit of believing this sequence inevitable, and began to surmise dynamic relations between the phenomena. The conception of space has been since described—and especially by Bain, Spencer and Mill—as a result of the perception of the individual's own movements transmitted to the consciousness by the muscle-sense; and quite recently etymology has been quite successful in deriving evidence from the meaning of the roots of the words now used to express ideas of time, that man originally meant to signify by time, the day, the interval of sunlight, and not anything absolute, *a priori*, which consisted of something beyond the solar system, beyond the alternation of days and seasons, beyond a nature, which exhibits nothing but a succession of changes.

The case has been the same in regard to ethics. One day it was found existent: the fact was recognized that human beings had a conception of good and evil, of virtue and vice, and no one thought of inquiring whether this conception had been naturally evolved, but all leaped at once to the conclusion that just so, just as it then lived, moved and had its being, it must have been revealed to mankind by some divine being. We know now, to be sure, that there is no such thing as good and evil, but that the necessity of a life in common has gradually induced human beings to designate those actions which are prejudicial to the interests of the community as a whole, as bad and vicious, and those advantageous and conducive to these interests, as good and virtuous.

Æsthetics has not escaped this universal law of hasty conclusions, which, strangely enough, claims to be profound penetration. As the conception of beauty, as mankind now possesses it, is not capable of a direct explanation by any pretensions to utility nor any other process apparent to the senses, from Plato to Fichte, Hegel, Vischer and Carrière, a hundred philosophers have been ready with the obvious assertion that this conception is another one of those mysterious phenomena which indicate a certain superhuman something in man, one way, in which the finite human intellect can form an approximate conception of the infinite, a sublime presentiment of the non-material being who is the primal cause of all material phenomena, and all the rest of the like meaningless aggregations of words.

The proverb says never to show a fool an unfinished house. But the proverb is entirely wrong. It ought to be the reverse, that a finished house should never be shown to a fool; for when the house stands complete, the fool stares at it with open eyes and mouth, and can not understand how it ever came to be so tall and wide and magnificent. If, on the other hand, it is shown to him unfinished, if he is allowed to watch as stone is laid upon stone, beam upon beam, it is no longer difficult for him to understand the growth and existence of what now so astonishes him, its construction and its purpose, the why and wherefore of its parts, and the how of the whole. A well-known anecdote of George III of England, states that he once fell into a reverie over some apple dumplings which had been served up to him at a farm table, when he was hunting one day, and after profound meditation he exclaimed: "How the devil did the apples ever get inside the dumplings?" The science of metaphysics stands before the psychic phenomena like George III before the dumplings. As it does not

seem possible to conceive that the apple could have got inside the round dumpling in any natural way, it at once assumes that there must be some miraculous and supernatural way. Thus the ideas of time and space and causality must be innate, "*a priori* intuitions," thus our conception of morality must be a divine revelation, thus our conception of beauty must be a perception of something transcendental and infinite. Here the philosophy of evolution steps in, and describes with the homely common sense of a cook, that the apple dumpling as it appears smoking on the table, is in fact something beyond our powers to comprehend and to explain; but that it has not always been the symbol of eternity that it is now, in its roundness without end, and its solid whole without any opening, but that it was once pliant dough, which could be very naturally wrapped around the apple, as is very easy to understand, and the mystery ceases to be a mystery.

Like our code of ethics, and our ideas of time, space and causality, our conceptions of the beautiful ought not to be considered as they exist in their present complete state, if we wish to understand them, but we must investigate how they have come to be what they now are. At the present day they are something very complex; originally they were something exceedingly simple. We apply at present the adjective, beautiful, to a long list of objects of the most varied character, which appeal to the most varied senses: music and paintings; a landscape and a waterfall; a cathedral and a storm at sea; a poem and an ornament set with jewels. In the same way we term a long list of sensations æsthetic, which are entirely dissimilar in almost every respect: the rapturous sense of awe we experience at the sight of the thundering spring-tide surf, as well as our amused delight when we are contemplating one of Oberlænder's pictures in the *Fliegende Blätter*, our admiration

of the Venus of Milo, as well as our appreciation of a grand and imposing building. Metaphysical æsthetics has strained every point to trace back this multiplicity to unity. But it has all been useless labor, with no tangible results. To make the different objects resemble each other, they first had to be stripped of their most essential characteristics, adding to one what was taken from another, depriving another of what the former lacked. And when this work of counterfeiting and adjusting was not sufficient, some arbitrary addition was made to them, thus producing a sham similarity between them, due, not to the natural features, but to the artificial disguises of the objects. We will make the same attempt, but by a more honest method; instead of zealously stirring up the elements of the complex phenomena into confusion worse confounded, and making them still more difficult to be recognized and apparently more similar, by pouring some of this metaphysical broth of infiniteness over them, we will, on the contrary, separate them one from the other and return to each its original appearance.

One quality is common to all æsthetic sensations: that they are the reverse of disagreeable sensations. But the feelings of pleasure which the different manifestations of the beautiful inspire in us, proceed from entirely different organic sources. Before we begin to dig for these sources one word in regard to the agreeable and disagreeable sensations themselves. Agreeable sensations are those aroused by impressions or ideas of impressions, which are in some way conducive to the preservation of the individual or of the race; disagreeable sensations are all those the reverse of this. The fact that this is the case is based upon a natural and spontaneous foundation. A being in whom the impressions upon his senses which menaced or injured his existence did not arouse any disagreeable sensa-

tions, would not have had any cause to avoid these impressions, and consequently would have succumbed to them in time, and would not leave any descendants to represent him in the organic world of the present day. The reverse would be the case with a being who experienced injurious or menacing impressions as disagreeable sensations, and thus received from them an impulse sufficiently intense to induce him to avoid or ward them off, and thus protect himself from injury and ensure a regular development for himself, which would have included the production of offspring. So far we have referred only to the avoidance of what is deleterious. But this is not enough. To thrive especially well the organism must seek conditions which are not only not deleterious, not only neutral, but of pronounced benefit. It is obliged to experience favorable and necessary conditions as agreeable, and thus be induced to desire and strive for them. The more intense the pleasurable sensations it experiences from beneficial impressions, the more energetically it will exert itself to obtain them, and the more favorable the effect they will produce upon its growth and development. Hence the organisms of the present day represent the chosen few among our predecessors who experienced with the most intensity those impressions deleterious to their existence as disagreeable, and those conducive to their existence, as agreeable sensations. I will allow myself one single example to elucidate this fact. Considered in themselves alone, all odors amount to the same thing, and there are neither agreeable nor disagreeable ones among them. The odor of putrefaction and the odor of a rose are no more different in themselves than a blue and green light, for instance, or the notes of a trumpet and of a flute. If there were something beyond the sense of smell, some substance upon which odors made an impression, like that of light on chloride or

bromide of silver, so that some instrument could be devised, which would be to odors what the photographic apparatus is to light, then we could convince even the most unphilosophical mind, with the greatest facility, that the odor of decaying matter is in itself an odor like any other, and only makes an unpleasant impression upon the human nose owing to its present construction. But it happens that the odor of decaying matter clings to certain fluid and gaseous substances, which originate in the vital activity of minute living beings who are very dangerous to the higher forms of animal life, while the odor of a rose proceeds from a flower which flourishes only in dry, sunny places, and blossoms in the fairest season of the year. A being to whom both odors were alike indifferent or who might even happen to prefer the odor of decay, would not avoid the places where putrefaction was taking place; he would breathe poisonous gases, perhaps even eat putrid matter, containing the cadaver-poison, (the so-called "ptomaine"), and come into contact with the microbe organisms, which would produce dangerous and even easily fatal diseases in him, and he would begin to dwindle and perish sooner or later. On the other hand, a being in whom the odor of putrid matter produced disagreeable, and the odor of a rose, agreeable sensations, would avoid all those possibilities of harm which are associated with the former, and would prefer to seek out warm and sunny spots in the open air during the spring and summer, which would be very beneficial to his health as a matter of course. He would thrive and produce vigorous offspring, who, being stronger and more prolific, would soon supplant the offspring of the being who was indifferent to or preferred the odor of putrid matter, until in time there would not be any beings with healthy nervous systems in whom the odor of decay would not

arouse disagreeable sensations, and the fragrance of a rose, agreeable ones. The effect of the two odors can also be increased by the ideas associated with them, which they naturally arouse. For instance, we associate with the odor of decaying matter the idea of certain phenomena connected with the death and annihilation of the organism, and with the rose, the idea of that season in which food begins to become more abundant, when heat returns, and when life in general becomes easier and pleasanter to man.

This rule, that all our agreeable and disagreeable sensations were primarily due to the usefulness or the injuriousness of the phenomena producing them, for the individual or the race, has no exceptions. The facts advanced to refute it are drawn from inexact observation or are superficially interpreted. One example to prove this. Alcoholic intoxicating beverages arouse decidedly agreeable sensations in the drinker, and yet they are extremely injurious to his health and his life. This is true. But why do alcoholic drinks affect one thus? For the reason that, at first, before they paralyze and stupefy the organism, they excite the nervous system to increased activity and produce an intensive feeling of vigor and cheerfulness, stronger will-impulses and a more copious flow of ideas in the judgment, a condition, that is, which can only be induced in a natural way by those circumstances which are extremely beneficial to the health and life of the individual, such as superior alimentation, ample rest, perfect health, inhabiting a place where the air is rich in oxygen, association with friends whose society one enjoys, youth, the lack of all causes for anxiety and care, etc. Primitive man learned to recognize this exhilarated frame of mind which precedes the actual state of intoxication, only in conjunction with these most favorable circumstances, and according to the law mentioned above, was

obliged to apprehend it as an agreeable sensation. Not until long after, when the delight in this frame of mind had become an organic instinct within him, did he invent wine and brandy, and thus obtain the possibility of producing this exceedingly delightful increase in the vital activity of his brain and nerves, by an artificial and injurious means. But this was only a few thousand years ago, and an instinct which has required hundreds of thousands of years to become organic in man can not be transformed in a period of such comparative brevity. If alcohol existed in nature, complete and within the reach of all, like water and fruits, so that man and his predecessors had been familiar with intoxicating liquors from the beginnings of life, and had associated this exhilarated frame of mind with it, from the earliest years, then all those beings who had experienced it as an agreeable sensation, and had therefore exerted themselves to obtain it by an abundant supply of alcoholic stimulants, and thus become drunkards, would have experienced in their own persons the evil effects of alcohol and become extinct in a short while; if this had been the case there would be no persons alive at the present day except those to whom alcoholic liquors smelt and tasted as repulsive as petroleum or the fluids of putrefaction, and who would consider the general exhilaration produced by alcohol, a disagreeable sensation.

The agreeable emotions which are aroused in us by the beautiful—using the word in its most comprehensive sense—have identically the same origin as all the rest of man's agreeable emotions. They are a consequence of the fact that what now appeals to our senses as beautiful, was primordially either something beneficial or useful to the individual or to the race, or else that the individual first learned to know it as combined with beneficial or useful

phenomena, and organically associated it with the remembrance of the latter ever after.

Those phenomena which are experienced as beautiful fall naturally into two great classes. They are those which are connected with the existence of the individual, and those connected with the existence of the race. The former class comprises what is sublime, what is charming, and what is adapted to its purpose; the latter what is actually beautiful in a more limited sense, and what is pretty. These five forms of æsthetic beauty are frequently mistaken one for the other, while yet on account of their dissimilar nature, the most careful distinction ought to be made between them. We will now investigate each in turn and endeavor to ascertain the relations between them and the instinct of self-preservation in the individual and the race.

The sublime is the perception of an immense lack of proportion between the individual who perceives and the object perceived, and of the overwhelming superiority of the latter. Everything grand and everything majestic produces the effect of sublimity. The idea upon which the sensation of sublimity is founded is the following: compared with this object, I am nothing. Against this object my strength is insignificant. To struggle against it, to conquer it, is absolutely impossible. If I were obliged to contend against it, I should be annihilated! This sensation is very nearly akin to mortal fear, and it is in reality only to be distinguished from the latter by the fact that there is a second idea associated with the idea of one's own impotency, to the effect that fortunately no such struggle with the mighty object is impending, and that this overwhelming superiority is not in reality to be employed to subdue and annihilate the being contemplating it. The spectacle of Rome burning, viewed from the ter-

race of the imperial palace, might awaken the sensation of sublimity, as the imposing sight contains no element of danger for the observer. But if he is surrounded by the conflagration, on the other hand, it would not arouse a sensation of the sublime but an agony of fear in him. The surf of the ocean, viewed from the beach, is sublime; but it arouses an agony of fear in the mind of the shipwrecked person, who must pass through it to reach the shore. The physical conditions which accompany the sensation of the sublime, are identical with those that attend the sensation of mortal fear. There is the same anxiety, the same cessation of the heart's palpitations, the same catching of the breath, all indications of the excited state of the so-called *par vagum*; there is the same chill passing down the spinal cord, the same immobility, which we might call a temporary paralysis. Sensitive natures become benumbed and as if turned to stone at the aspect of what is sublime as well as of what is really terrible and threatening to them. The sense of the sublime is thus most directly associated with the instinct of self-preservation in the individual, that is, it is due to his habit of feeling himself in a perpetual state of opposition to the external world, which he regards as a possible enemy, and to his habit of realizing the probable results of victory or of defeat in case of a conflict.

The charming is the sensation aroused by those phenomena which produce simultaneously a large number of impressions on the senses in a given interval of time, and excite the centres of perception, reason and judgment to an animated vital activity. The effect of a bare wall is tiresome, because it produces only one single impression upon the sense of sight, and does not require any increased activity on the part of the brain to interpret it. A wall profusely decorated, on the other hand, produces a charm-



ing effect because a single glance at it causes a number of impressions on the sense of sight, and excites the brain to animated activity to interpret these impressions. What is monotonous or uniform may produce the effect of sublimity upon us when it appears as something of vast extent, but it never interests us, which effect can only be produced by that which is the reverse of monotonous—multiformity, diversity of variety. What interests us ceases to be experienced as interesting when it is no longer capable of being superficially perceived, when it can not all be grasped at a single glance and interpreted by the reason without effort, but requires arduous exertion from the brain centres in the way of investigating, separating and analyzing. For this reason, everything confused and too profuse in details, ceases to be interesting. It is also a self-evident fact that the diversity ceases to be interesting if its single parts are not experienced as agreeable in themselves. Hence a wall smirched with dirt spots of the most diverse sizes and shapes, will not be interesting, notwithstanding the diversity of its aspect. To experience, therefore, anything as charming, the individual must first experience the consciousness of his own life as something agreeable. But this consciousness consists in the perceiving of impressions on the senses, and whatever produces a number of simultaneous impressions, which can be perceived without effort, imparts an increased intensity to the consciousness and a richer apprehension of his vitality to the individual.

What is adapted to its purpose or design, the appropriate, does not produce the actual effect of beauty upon us, but rather of satisfaction, and as the latter is also an agreeable sensation, it is easily mistaken for beauty. What is adapted to its purpose or design is what is intelligible, that is, it coincides with our human conceptions of the laws that govern phenomena. A stone pyramid stand-

ing upon its apex appeals to us as something the reverse of beautiful in every respect, because it does not seem appropriate, because its position contradicts our conceptions of the laws of gravity and the laws of equilibrium deduced from the former. We would necessarily feel that it could not remain permanently in that position, that it must soon fall. The leaning tower of Pisa produces a similar effect. It produces an effect the reverse of beautiful upon natural tastes, it causes distrust and a feeling of anxiety, and these are disagreeable sensations. A house, with massive stone upper stories resting upon thin iron columns, produces the same effect, the reverse of beautiful, because its construction seems inconsistent. If men had been accustomed for centuries to the sight of buildings in which iron and stone had been employed in this same way, then there would be a general impression that a small quantity of iron possessed a vast supporting power, which far larger quantities of stone and wood are not able to overcome. Then the sight of great masses of stone work upheld by slender iron columns would no longer awaken ideas of incongruity and inappropriateness, and houses with iron basements and stone upper stories would no longer produce an unpleasant effect, as the effect produced by a tree with wide spreading branches is not an unpleasant one, notwithstanding the fact that it differs from our fundamental conception of a solid and firmly based object, viz., a figure resting on a broad foundation, and diminishing as it approaches the top,—because we know that the trunk is solid in spite of its small size, in proportion to the whole tree, and the spreading branches, in spite of their great circumference, very light. The effect of appropriateness is connected with that instinct which impels man to comprehend phenomena and divine their laws, which are not apparent to the senses. He experiences what is un-

known and what he does not understand as something inimical and mysterious, something threatening, beyond his powers to cope with, while whatever is clear and rational inspires him with a sense of familiarity and confidence. For this reason, whatever is adapted to its purpose or design—which is only another way of saying whatever is familiar and comprehensible to him—arouses agreeable sensations, and whatever is not adapted to its purpose or design, arouses disagreeable ones.

We know now that the effect of what is sublime, what is charming, and what is appropriate, has its origin in man's fundamental ideas of his perpetual opposition, that is, hostile relation to the external world, the Non-Ego, which all appeal to his instinct of self-preservation. We will next proceed to show how his apprehension of what is beautiful, in a restricted sense, and what is pretty, is directly connected with the instinct of race-preservation in him.

Every impression on any sense that arouses the highest sex centre in the brain to activity, either directly or by any association of ideas, produces the effect of beauty upon us. The grand type of everything beautiful—in the eyes of man—is woman, at the period of sexual maturity, and capable of propagating her kind; that is, a young and healthy woman. She excites his sex centre to the most intense activity, the sight of her and any idea connected with her, arouses in him the most intensely agreeable sensations that it is within the power of any mere sight or idea to produce. The habit of associating woman's appearance with his conceptions of beauty and the agreeable sensations caused by the latter, which has finally become organic, induces the human intellect to ascribe the feminine form to all abstract ideas which are experienced as agreeable or beautiful. For this reason we

represent our conception of our native land, of fame, friendship, sympathy, wisdom, etc., in a feminine form. This ought not to influence woman's ideas. The sight or the idea of a person of her own sex has no power to excite her sex centre to any form of activity, and hence man must be her ideal of beauty. That her ideas as to what is beautiful are about the same as those of man, is owing to the fact that man, being the stronger organism, has impressed his own ideas upon her by suggestion, and banished her own contradictory ideas. It must be stated here, however, that the ideas of the two sexes in regard to what is beautiful are only approximately and not identically the same, and if woman had any aptitude for and skill in the critical observation of herself, and in analyzing and describing the states of her consciousness, she would long since have established the fact that her system of æsthetics differs most essentially in many respects from that of man.

We consider those objects pretty which awaken the idea of childhood, either directly or by some association of ideas, and thus excite the instinct of love of children upon which the preservation of the race is dependent. We experience therefore as pretty everything small, dainty, and helpless, but especially the diminished copy of some familiar object which is much larger and more imposing in reality. These diminutive copies produce the effect of being in the same proportion to their originals as children to adults. Unmistakable traces of this way of thinking are found among uncivilized peoples and in less developed languages. The Indian actually believes that the wheelbarrow is the son of the dray, and in the Magyar or Hungarian language, the pistol is called the "gun's baby," (*kölyök-puska*.) The physical phenomena and counter-effects produced by what is pretty, have the greatest resemblance to the effect produced by the sight of a child.

Women feel like kissing what produces the effect of prettiness upon them, and experience in actual fact an almost irresistible impulse to caress it in the characteristic maternal way, that is, to stroke it, take it in their arms and carry it to their lips.

Many objects, in consequence of the extended and diversified associations of thought awakened by them, appeal simultaneously to the instinct of self-preservation, and also to that of race-preservation, and to the different subordinate forms of these instincts, and are experienced as beautiful in different ways. For instance, spring in nature is beautiful, charming, and adapted to the end in view. It excites the sex centre to activity, because to primitive man and the lower forms of organic life that preceded him, it was the season of love, as it brought a more abundant supply of food to all living beings, and thus ensured them a more vigorous vital activity. It is furthermore charming, because it includes a vast and yet not a bewildering array of agreeable details, and consequently produces in a given interval of time the largest number of simultaneous impressions on the senses, and lastly, it is adapted to the end in view, as it arouses the idea of more favorable conditions for individual life.

I alluded above to the difference between the æsthetics of the two sexes. It is the organic result of the constitution and division of labor between the sexes in the human race as it now exists. Man represents individuality in the race, original development, and thus in a certain sense, selfishness, which looks after its own interests alone, and never concerns itself with those of others except when its own requirements make it imperative; he is continually on the defensive against nature and against his fellow-men, and in his struggle for food and love, he has to be perpetually warding off dangers, overcoming resistances and devis-

ing schemes of aggression. The instinct of self-preservation is, therefore, developed to an especial extent in him, as this is all that he has to instruct him how to avoid dangers and vanquish his foes. Consequently those objects that appeal to his instinct of self-preservation produce a more profound effect upon him than upon woman; he has more recognition and appreciation of what is sublime, what is charming and appropriate than she has. Woman, on the other hand, is the one who carries all the hereditary attributes of the race, she is the one who is responsible for their preservation. She does not do battle, and is therefore exposed to less dangers, and it is not necessary for her instinct of self-preservation to be developed to any special extent; but, on the other hand, the instinct of race-preservation is more intense in her, and impressions upon the senses which affect her sex and maternity centres produce more of an effect upon her than upon man. She has thus a keener appreciation of what is beautiful, in the more restricted sense of the term, and especially for what is pretty, which appeals far more than what is beautiful to a specifically feminine instinct, the love of children.

Originally the sensation caused by beauty was produced by natural objects alone; and art can only arouse this sensation to the extent that it succeeds, by the means at its command, in awakening the ideas of natural objects which are experienced by us as beautiful. These means are direct imitation, symbolization and the winding up of the mechanism of the associations of ideas by ideas or impressions on the senses. Thus language can arouse the sensation of sublimity as it awakens the idea of something mighty, immeasurably superior to man, as when it is describing some omnipotent divine being, or the operation of enormous forces in natural phenomena, battles, human destinies, etc. Architecture can produce the effect of sublimity by con-

structing enclosed spaces and massive edifices of such colossal dimensions that the observer feels himself as small and feeble in comparison with them as with the primeval forest or the everlasting hills. A work of art produces the effect of appropriateness when it proclaims its purpose and its laws of being in its visible form, which it only does when it recalls familiar natural objects to our remembrance, whose purpose long experience has made familiar to us, and whose laws of being—always with the exception of the ultimate cause—we are able to divine. The forms of organic animal and plant life, the outlines of crystals, and the groupings of the larger accumulations of matter as controlled by the laws of mechanics, are the familiar and comprehensible natural phenomena, which the productions of art must resemble in order to be recognized as appropriate and enjoyed as beautiful. It is not within the power of each separate art to impart all the æsthetic impressions, but only those which are associated with the objects it is able to imitate or recall to the spectator's remembrance. For instance, architecture is not able to produce the impression of beauty in its narrower sense, that is, to incite the sex centre to activity, except by resorting to sculptural ornament, when it is no longer architecture. Music can not produce the effect of prettiness, because it is not able to imitate the essential characteristics of the sight of childhood, nor to suggest them by any association of ideas.

I have thus defined æsthetics in general outlines as it is found in nature and evolution, and shown the needlessness of introducing any transcendental element to explain the sensation of the beautiful. And if now some patient commentator chooses to spin out these leading thoughts into a three volume compendium, he has my best wishes for his success.

## SYMMETRY.

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We will begin by establishing the fact that there is not a single example of perfect symmetry in all nature, that is, of a form, which repeats with absolute regularity the same disposition of parts on both sides of an imaginary line through the middle. Even those natural objects to which with the least constraint we are able to ascribe a law of symmetry, such as crystals, flowers, leaves set in two rows, and those animals that develop to the right and left from a longitudinal axis, are not really symmetrical, and in fact, can not be cut into two or more parts that would exactly cover each other. Everything which we are able to perceive with our senses, is irregular. It differs in some unprecedented manner to a more or less degree, from the design which the human mind imputes to it; it is perpetually rebelling with greater or less violence against the law by which we like to believe it is governed. Not a single heavenly body is mathematically round, not a single orbit conforms precisely to the scientific formula we have laid down for it. Not a single human face appears exactly the same on the right side as on the left, no bird has two wings entirely alike. And this universal lack of symmetry, or asymmetry, prevails not only in those objects which we can perceive with the naked eye, but in the inmost and most secret dispositions of matter, especially in its organic combinations. The fact that a ray of light on its way is diverted in the most diverse angles, in setting free

different kinds of organic matter, and deflected to the right and again to the left by a body that is apparently the same in its chemical composition, is claimed by Pasteur as a proof of the fact that atoms are disposed in the molecules with a lack of symmetry in the design, and he announces as the cause of this, that the natural forces which produce the arrangement of the atoms and molecules—heat, light, electricity, attraction, etc.—are also asymmetrical. He develops this idea further, and even ventures to assert that life is ultimately asymmetry, and that we shall be able to concoct life in our retorts out of simple primeval matter when we shall have learned to employ asymmetrical forces.

I must confess that these ideas seem to me to pertain to mysticism rather than to chemistry, mechanics and biology. I am not certain as to what is meant by an asymmetrical force or the operation of such a force. But be the cause what it may, the fact is established that nature knows no symmetry. It is an invention of the human mind, never suggested by any exemplification of it. Man created it entirely in himself. Art has an instinctive consciousness of this, and in its highest efforts seeks to follow the seemingly whimsical lack of symmetry of nature. Whenever it is symmetrical, it ceases to produce a charming effect. Nature produces the stream, whose serpentine course shows varying lines at every step; art creates the canal, the realization of a geometrical formula, which does not show from one end to the other any unexpected deviations from the design of its construction, which can be recognized in the course of a few steps. Every step in the forest brings a surprise, and one has only to turn his head to receive a new impression. A French garden is like a carpet with the same pattern repeated on every square yard, which reveals a poverty in its design if enough is unrolled, although the first yard may be designed very elab-

orately. What is asymmetrical pleases man's taste, while what is symmetrical arouses an unpleasant sensation in him. He prefers these asymmetrical approximations to nature, even in human productions, to the symmetrical creations, unless his taste is dwarfed or perverted. We consider the roads winding in capricious curves over mountains and through valleys incomparably more beautiful than the straight railroad, drawn by line; an English park with its artificial wildness far more charming than Lenôtre's improvements; a Morris tapestry with its unpruned climbing vines, flowers and leaf work more interesting than wall paper in the French rococo style; the Gothic cathedral, in whose rose-windows and gargoyles the architect's creative imagination rioted at will, where not a single flourish resembles another, no bit of regular work is precisely like the rest, produces an effect infinitely more charming than that of the Grecian temple, all whose columns look exactly like every other column, which is the same in the rear as in front, the same to the right as to the left, and which might be turned, like a good piece of cloth, without its appearance being altered in the least. We admire a portrait which faithfully reproduces all the irregularities of an individual's features, and smile contemptuously at the best-drawn fashion plate with its expressionless,—because so painfully symmetrical—ideal heads. The great success attained by Japanese art in Europe is due to its asymmetrical character. A servile imitation of nature, it follows it in its apparently arbitrary fancies. It contemns the golden mean which human beings have invented—which is more speculation than a sense for the beautiful—and never tyrannically imposes any formula upon a human figure which is not originally its own.

But, as symmetry is not a natural form of growth and



as it does not appeal to us as beauty, we are led to inquire how the human mind happened to conceive the idea of it, and to which of its necessities it corresponds.

The reply to this inquiry is found in the fundamental peculiarities of man's intellectual activity.

In the first place, we have the habit of causal thought. Back of the phenomenon apparent to our senses we surmise some immaterial element, entirely beyond all direct observation, which we designate the cause, the sufficient reason, or the law, as we choose, and to which the different philosophers have applied other terms, as for instance, when Schopenhauer calls it will, Frohschammer, imagination, etc. No one has ever actually recognized a cause as such. We have only observed phenomena succeeding each other without any real dependence between them. Their connection by means of some tie not manifest to the senses, of cause and effect, is exclusively the result of our habits of thought. We see the lightning and we hear the thunder. We also notice that as a rule they appear one after the other. But that a chain issues from the lightning which drags the thunder along after it, this we neither see nor hear, we are not informed of it by any of the senses which convey the phenomena of the lightning and the thunder themselves to our consciousness; it is added by our brain, entirely on its own account, to these phenomena.

This habit of causality has caused us to attribute to the immaterial element of the phenomenon, the element not apparent to the senses in any way, the supposed or imaginary cause, an importance greater than that we attribute to the phenomenon itself. This is natural. The design which we ascribe to the phenomenon is a production of our own brain and can be perceived directly by the consciousness without the intervention of the senses, while the phenomenon itself proceeds outside of our consciousness,

and is only transmitted to the consciousness by the senses; but what we create in ourselves, what is evolved before the eyes of the thinking Ego, as it were, what is perceived without any intervention on the part of the senses, must seem of necessity more real, more essential and more vivid to this Ego, than the phenomenon which occurs outside of the Ego and is never thoroughly perceived in all its details. When, therefore, the phenomenon, as it is perceived by our senses, and transmitted to our consciousness, does not exactly coincide with its plan or law, as our brain has contrived it, we calmly sacrifice the phenomenon to the law, we falsify the former to save the latter, we give more credence to the inward workings of our brain than to our senses, and compel our perception to accommodate itself to what we have invented. We see, for instance, a crystal, a cube, one of the simplest forms of crystallization. Three sides of the crystal are regular, the three others are not. We have, however, evolved a plan in our minds for this phenomenon, which requires six equal square planes, twelve edges of equal length, and eight right-angled corners with three plane surfaces each. The crystal we see before us does not correspond with this plan we invented for it. We do not hesitate an instant in our assumption that the phenomenon is wrong and our invention right, and say to ourselves: "This crystal was intended to become a cube. But the material has not carried out the idea. It is our part, therefore, to help out the material and to give it the shape which it strove to but could not assume," and so placidly and self-satisfied, we see in the form—which is a phenomenon in itself and differs entirely from a cube—a cube.

We are now in the most secret work-room of human thought, and I beg the reader to have a little patience while we look around us more attentively. Attention is

an indispensable prerequisite of all labor on the part of the consciousness. In this we have to imagine the most animated activity of certain nerve fibres and cells in the brain, owing to a more copious supply of blood, while all the other cells and fibres receive less blood, and are therefore more feebly nourished, and hence are completely at rest or do their work languidly. A stronger impression on the senses imparts a stronger stimulus to the brain fibres and cells appointed to receive it and rouses them from their quiescent state, as it were, while a feebler impression allows them to remain torpid. The stronger impression therefore attracts our attention and reaches our consciousness, which the feebler does not. We have already seen in the chapter on genius and talent, that we perceive with our consciousness only those elements in a phenomenon which produce the strongest impression upon our senses, and thus attract our attention. The example I mentioned to illustrate this fact was an oil painting. It is the optical element in this obviously very complex phenomenon which produces the strongest impression upon our sense of sight, and attracts our attention and is thus consciously perceived; the other elements, such as the odor of the oil, are weaker; they do not produce enough of an impression on the appropriate senses, on the sense of smell for instance, the corresponding perceiving centres are not excited to action to a sufficient degree to arouse our attention, and hence the consciousness does not learn anything in regard to those other elements in the phenomenon "oil painting," and consequently when it is evolving the idea of the painting, it merely recalls the impression on the sight, while it overlooks entirely the perceptions of the other senses occasioned by the oil painting, which were not sufficiently strong to arouse our attention. This process which we have observed in the perceiving and evolution of the idea

of an oil painting is repeated in the perceiving and evolution of the ideas of all other phenomena. Some one element predominates in each one of them, while the remaining elements produce a much weaker effect, that is, attract our attention proportionately less. Thus we are accustomed—and in the same arbitrary manner as when we are imputing some cause not apparent to the senses to all phenomena—to make the predominating element of the phenomenon its one essential element, and in our perception of it and our idea of it, we overlook all the remaining elements. In the defective cube of a natural crystal, as a crystal of rock salt for instance, the element of the cubical formation predominates. A few plane surfaces, edges and corners of a more or less regular shape, attract our attention and we have no attention left to bestow upon the imperfect planes, the defective edges and the missing corners. The consequence of this is that we only perceive its predominating element—its cubical formation—in the phenomenon of an irregular crystal of rock salt, and reproduce this element alone in our evolution of the idea of such a crystal, although its less striking elements, its irregularities for instance, have their own importance and appropriateness, and are quite as essential to the individual crystal of rock salt we have before us, as those parts of the crystal which are formed in accordance with the assumed design of a cube.

The fact is, the human brain is an imperfect machine. It is constructed in such a way that blood can not be supplied simultaneously to all of its fibres and cells in sufficient quantities, they can not all be sufficiently nourished and stimulated to attain to that degree of activity which our consciousness perceives as attention on their part. Only part of the brain has full play all the time; the rest is more or less quiescent. It follows as an inevitable result of this imperfectness that we are not able to

pay equal attention to all the elements of a phenomenon, we are not able to perceive them all equally, and only remark those which predominate, which produce the strongest impressions upon our senses, and summon the nourishing blood to the brain fibres and cells associated with the senses affected, thus arousing them to a state of attentiveness. The single element that produces the profoundest impression upon our senses, seems to us to comprise in itself the whole phenomenon, and we apply the design which we have attributed to this one element to the whole phenomenon. This explains why we have the tendency to schematize, to assume, that is, a certain design in phenomena, to trace them back to some simple assumed cause. What is a *schema*? It is the term used by Kant to designate the plan or law of formation which we impute to some one arbitrarily selected element in a phenomenon, and into the frame of which we endeavor to fit all the other elements, whether they rebel against it or not, in reality. This tendency to ascribe a *schema* is one of the defects in our habit of thought, which is explained by the imperfectness of the human brain, alluded to above. For if we already have a habit of causal thought, if we already ascribe to every phenomenon apparent to the senses some presupposition of something not apparent to the senses, we ought, to be consistent, to ascribe this presupposition, that is, a cause, to all phenomena, and not merely to those we have arbitrarily selected. In reality no phenomenon is precisely like any other; the individual diversities must have their causes just as much as the resemblances—if we once assume that these latter are the result of some cause, some law—and we not only have to impute one design, one *schema*, to any phenomenon, but a hundred designs, a hundred *schemas*, one for each element, a design that belongs to each element alone and to none other. To retain

the illustration of the crystal of rock salt given above. When we insist upon seeing a cube in the irregularly shaped object before us, we regard none but those parts which are disposed regularly, saying to ourselves: "The cause of the shape assumed by these parts is that the whole wished to become a cube. The *schema*, the design of this object is, therefore, the cube." But we have not the slightest right to overlook the deviations from our *schema*; we ought to assume a cause for them also; the cause which allowed certain planes and angles to be defective, is evidently a different cause from that which shaped the other planes and angles into the form of a cube; in reality, therefore, the crystal before us did not wish to become a perfect cube, but something different from this, something new, something departing from the cubic form, something which is the individual object as we see it, and nothing else; the *schema* of the cube, therefore, does not apply to it, and it is a mistake when we believe we recognize a cube in the form before us. But we make this mistake nevertheless, because it is not within our powers to bestow at the same time the same amount of attention on the irregularities—which do not strike us as much—as upon the regularly disposed parts, and hence do not feel compelled to invent any *schema* or cause for them, as is the case with the latter. And thus all our classification, all our *schemas* are erroneous, all our labor of associating different phenomena with each other, is arbitrary, all our reducing multiformity to uniformity, an acknowledgment of our inability to comprehend. Nature produces only individuals; we artificially combine them into species, because we are organically incapable of closely observing every single characteristic which is peculiar to any one individual, to appreciate it fully and to trace it back to some individual cause. If there are such things as causes, then

every phenomenon has not merely one, but a hundred, a thousand different causes, which have combined in this way for once only, and will never so combine again; then every phenomenon is the resulting effect of countless influences, all of equal importance, as the phenomenon would have to be something different from what it is, if only a single one of these influences had been lacking or found expression in another way; if on the other hand, there are no causes, then every phenomenon is an independent accident, and can not be compared with any other phenomenon, but must be judged by itself alone, and regarded as strictly individual. This is a dilemma which it is impossible for us to escape; the logical consequence of which is that in every single case the *schema* is a defect in our habit of thought, and prevents us from seeing and comprehending phenomena as they really exist; for if there are causes, then the assumption of a *schema*, that is, of a single determined cause, obstructs our view of all the other causes, of which the individual phenomenon is the effect; if there are no causes, then the assumed *schema* is only a creation of our imagination and has nothing whatever in common with the phenomenon itself. However, this is a matter in which we can not alter anything, and if we are not willing to accept that the human brain is capable of attaining to a far higher degree of organic perfection, and that some day it will be able to work throughout its whole extent with the same amount of attentiveness, then there is nothing left for us but to resign ourselves to the inevitable, and throughout all eternity perceive one trait with more distinctness than the rest in all phenomena, and confound this one trait with the entire phenomenon, and sacrifice to it all the other characteristics, to elevate it to the rank of a *schema*, and recognize in the phenomenon the realization of this *schema* or design.

One final peculiarity of the workings of the human mind yet remains to be considered. How does the mind go to work to invent this assumed preliminary ideal plan, of which the phenomenon is the supposed execution. It follows a very simple method in this task: it simply repeats the one trait which, as the most noticeable, attracted its attention and impressed itself upon the memory and the consciousness. It thus constructs the *schema* of the cube for the crystal of rock salt, by repeating the especial outlines which it noticed, that is, the regular plane surfaces and edges, until they form a solid figure. In this way the mind corrects the imperfect, crooked lines, making regular complete circles out of them, and completes the defective outlines in the shapes of crystals, flowers and leaves, making schematic figures of them. The imagination acts like a kaleidoscope in its relations to the impressions on the senses; it repeats the phenomena, irregular in themselves, to form a regular figure of them; for, regularity is in fact nothing but the repeated occurrence of the same phenomenon. The process in the brain is consequently the following: a phenomenon or material object is perceived by the intervention of the senses and impressed upon the memory; some noticeable trait or one not especially striking in itself, but frequently repeated, is perceived and retained most distinctly, very much in the same way as in Galton's family photographs,\* so that those features which are repeated in the different faces are more prominent than those which are individual peculiarities of

\* Galton's family photographs, as is well known, are produced by exposing the photographs of the different members of a family in succession to the same sensitized plate—the photographs being all of the same size and exposed for the same length of time. The features that are identical in several or all of the single photographs are repeated, and thus work longer on the sensitized plate than those

the separate faces, and thus appear but once before the sensitized plate. If the judgment now wishes to convey this phenomenon to the consciousness, to remember it, the memory supplies it to the judgment in the shape in which it had retained it; that is to say, it only imparts to the consciousness the most prominent characteristic trait of the phenomenon, the one that has made a profounder impression upon it, owing to its repetition; to make a complete phenomenon or object, bounded on all its sides, from these single isolated characteristics, the imagination completes them by multiplying the characteristics supplied by the memory, and thus produces a kaleidoscopic, and therefore regular figure, which the judgment becomes accustomed to consider as the *schema* or plan—the foundation of the phenomenon in question, owing to its tendency to assume some immaterial antecedent to the material phenomenon.

The conditions of our intellectual activity as detailed above, make it easy for us to understand how man happened to evolve the idea of symmetry. Unable to be attentive with all parts of his brain at once, he has only perceived and retained isolated characteristics of different phenomena or objects. To recall these phenomena afterwards to his mind, he completed them by multiplying these isolated characteristics and thus filled up the gaps which resulted from the absence of the rest of the characteristics which were not perceived, and therefore not retained. When he represented it in art, he did not copy

that recur less frequently or only once, and hence they are especially prominent in the composite photograph. In this way an average portrait is produced, which shows those features peculiar to all or most of the members of the family with the utmost distinctness, while those recurring rarely or but once, are given with a lack of distinctness corresponding to the lack of frequency in their repetition.

the real phenomenon, but the kaleidoscopically regular image, consisting of repetitions of the one characteristic observed, which was the conception of it in his consciousness. Every symmetrical human production is thus the embodiment of some reflection in the memory, schematically elaborated by the imagination, of some natural phenomenon imperfectly observed. It should be classed with man's first attempts in the line of art. In proportion as man develops, his brain is capable of more comprehensive attention; he perceives more elements in a phenomenon, more factors in the effect produced by a material object; he prints a completer picture of them upon his memory; his imagination is less frequently called upon to substitute the missing parts by a repetition of those already existing. Thus he sees things more correctly and more exactly, and when he desires to portray them in art, he represents them less schematically and more individually. The hastier and the more superficial the observation of any object, the more symmetrical the idea retained of it by the memory. This is true of individuals as well as of peoples and of races. Symmetry never appears in art except in retrograding nations and in periods of decline. Flourishing epochs and progressing peoples are not satisfied with the *schema* and the kaleidoscopic multiplication of single characteristics, but endeavor to reproduce the individual peculiarities of phenomena as far as possible.

This same tendency experienced by the human intellect to complete its unfinished ideas by the repetition of the elements of them it already possesses, impels it also to other psychic phenomena than the idea of symmetry, or to be more exact, it is inductive to a non-material application of symmetry. The legends of Frederick Barbarossa, of the Portuguese Dom Sebastiao, are based upon this fondness of the human mind for symmetry. A part of the life of



these heroes is known to the people, and is engraved upon their memory; the other part, the end, they never happened to know, or else they have forgotten; so in order not to have an unfinished conception of their life, they complete what is lacking by repeating what they already know and invent a continuation of the destiny of these heroes, which is maintained in the same character as the beginning, with which they are already familiar. These legends are therefore symmetrical formations; they are proofs of the fact that man does not confine his *schemas* to visible forms alone.

Symmetry produces a tiresome and disagreeable effect upon cultivated and healthy minds, because it does not stimulate them to more animated intellectual activity. The judgment, as often as it perceives a phenomenon or object, longs to compose some law of formation for it, to invent some *schema* to apply to it; this is a defect in the judgment, it is true, but it is a defect to which the judgment has become accustomed, and which it will not relinquish without resistance. A symmetrical phenomenon does not leave room for any effort of this nature. There is nothing to be divined in it, nothing to be invented to apply to it. Its law of formation? It proclaims it verbatim and pedantically. Its *schema*? This is identical with it and never differs from it in any respect. There are no prominent characteristics which can be retained and repeated to complete the imperfect picture. The symmetrical phenomenon has done this for us already itself. It is the materialized work of our imagination in a state of perplexity, and therefore a cause of shame for it. But of course the same reasons which make it a source of distress to active minds, render it a delight to obtuse and indolent brains. Any one who has never observed a phenomenon or object with sufficient attentiveness to perceive all or

several of its features, and to realize that they are entirely individual, and not exactly like anything else, will recognize precisely what he was able to see in nature in the symmetrical work produced by human hands. The images in his memory are patched up from repetitions of single crude characteristics; the world is reflected in his mind symmetrical and schematic. It gratifies him to see his superficial perception confirmed by the symmetrical work of art, and he considers the latter a compliment to his shallowness. Symmetry will therefore forever remain the ideal of beauty of the Philistines who are always asleep whether their eyes are open or not, and have a horror of anything tending to disturb the perpetual siesta of their brain. But any one who is not a mental Seven Sleeper, (the German Rip van Winkle), will consider everything symmetrical as a caricature of his own defective habits of thought, and will banish it from the realm of his perception as much as possible.

## GENERALIZATION.

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We had been discussing a certain nation over our glasses of beer, and had got so far as to pronounce a sweeping judgment upon the character and the physical and mental peculiarities of this nation, when one of us interrupted the conversation with the warning: "Let us take care not to generalize." The caution was unanimously accepted as proper. I was not inclined to criticise it. But generalization, which may be out of place around the social board, is permissible in the silence of the study.

Let us take care not to generalize! The warning is unassailable in theory. It proceeds from the realization, or at least due recognition of the fact, that one phenomenon or object can not give us any real, but only apparent information in regard to another, that the knowledge derived from one phenomenon will never apply at any time to another in every particular. Every phenomenon in reality exists for itself alone; it has in fact no connection, perceivable by the senses, with any other phenomenon, and if there seems to be anything of the kind, it is because we have artificially created it in our mind. To comprehend a phenomenon as it really is, that is, as it is cognizable by the senses, to do it full justice, to be certain that we only perceive what is actually occurring before our senses, we would have to face the phenomenon totally unbiassed, totally ignorant in regard to it, and without any prejudices, that is, we would have to forget everything

that we have learned from previous phenomena, and be careful not to confound any image we have previously received with the new one, or impute to the phenomenon any characteristics or associations which it does not really possess and which we transfer to it from other phenomena. These would be the indispensable preliminary conditions to approximate the truth as closely as is possible to our organization. This would be the way to obtain fairly accurate information in regard to the events occurring outside of our Ego, and to allow realities to produce their due effect upon us, instead of transferring the events occurring within our Ego into the realities without, and peopling them with the gay pictures of the magic lantern of our thought, thus causing us to lose sight of their actual significance, wholly or in part.

This, as before stated, is the theoretical presupposition. But it can not be realized in practice. The circumstances in which alone our imperfect organ of thought is able to perform its work, are directly opposed to it. In the preceding chapter we analyzed the exceedingly complicated framework of the habit of thought which led man to the invention of symmetry. We have seen how our mind, as it perceives that phenomena always succeed one another, has been induced to imagine some connection between them, and thus sees in each one the cause of the one that follows and the effect of the one that preceded it, and how the mind has finally come to imagine the cause as something actually existent, something essential and distinct from the phenomenon itself, which is realized only partially and imperfectly by the phenomenon. We have also seen that the judgment constructs the non-material cause, which it imagines is the necessary preliminary condition of the phenomenon, out of the images of previously apprehended phenomena supplied by the memory, and that these images

are produced by multiplying the single characteristics which attracted attention. This very same habit of thought leads us inevitably to generalize. What do we mean by generalizing? To generalize is to deduce the future from the past and present, the unknown from the known, and that of which we as yet have had no experience from what we have already learned by experience. All of this activity on the part of our organ of thought is arbitrary and wrong. We have no right in fact to assume that new phenomena are going to happen, or that they will resemble the previous ones, if they do happen. The future is inaccessible to our knowledge. We have not the least evidence that there ever will be any future, that new impressions on our senses will succeed our present impressions. And yet we do not hesitate a moment to assert that tomorrow is also a day, and that it will be something like a repetition of the day of today. In what way have we obtained this certainty? Exclusively by our habit of thought. Owing to the fact that up to the present time a new perception has always succeeded every perception, our mind has become accustomed to the idea, that this will always and must always be the case, and when it seeks to fill the empty space of the unknown and unknowable future, it peoples it with figures from the memory, that is to say, with repetitions of events previously apprehended,

"Call on the present day and night for nought,  
Save what by yesterday was brought."

Goethe remarks in his *West-Eastern Divan*. The warning shows thought, but is superfluous after all. For even if we were longing to, we could not demand anything of today or even of tomorrow, except what yesterday brought us; we do not know anything except what we have already learned by experience; and what we call the future, is nothing but the reflection of the past, which, in conse-

quence of the defective vision of our thought, we imagine is facing us, while in reality it lies behind us.

It is true, our arbitrary and mistaken assumptions have always been realized up to the present time. When our ancestors felt assured that there would be a future, they were not disappointed, as a part of this future has since become the past and the present, and a long list of their prophecies—founded upon no actual perceptions—have since been experienced by the senses. The events appear in the manner we surmise beforehand, and the reflection of what has already happened, projected into the future, becomes an actuality. But this does not prove that we are right. It is and has always been merely wild guess-work on our part, which happened to be correct. We are unable to produce a single convincing and thoroughly reliable direct proof that this will continue to be the case, or that it will always be the case.

This habitual disposition of our mind to generalize, which is due to the organic defectiveness of our thinking apparatus, is the source of all our formulated knowledge in regard to the cosmic phenomena, of all the laws of nature. They are therefore nothing but self-deceptions. As, in actual fact, we have not the slightest knowledge of the real essence of the cosmic phenomena, and really do not understand a single one of the so-called laws of nature. Or can we speak of comprehending when we are not even able to establish the facts as to the existence of any cause of the phenomena? If there is no such thing as a cause, then there can not be any laws, but merely accidents that repeat themselves, we know not how. But if we assume that there is such a thing as a cause, and that we can give it expression in the form of a law, what is this cause, and how reads the law which is the name for it, and which represents its operations. The man is not living who could

give a rational reply to this question. When we speak of natural laws, nevertheless, it is merely a pleasant playing with words which we have devised to help us across the insufferable, tiresome desert of our ignorance. What we call a law of nature is simply the establishment of the fact that certain phenomena have always occurred; but it neither explains how this came to pass, nor does it include any proof that the same phenomena will always occur. We say that it is a law of nature that bodies have an attraction for each other, and that the force of the attraction is in direct proportion to the mass of the bodies, and inversely to the square of the distance between them. This is incorrect. It would be correct to say that up to the present time we have always observed that bodies had an attraction for each other, in direct proportion to the mass of the bodies and inversely to the square of the distance between them. This assumed law does not attempt to explain the facts observed; it is only a pretentious way of expressing them. Neither are mathematical formulas the explanation of mechanical phenomena; they are merely the latter expressed in different terms in a technical language. Thus Molière's facetious physician informs Geronte, who asks him why his daughter has become dumb: "Her language has been stolen from her, and that is the reason why your daughter is dumb." A law is a command which dictates some action or refraining from action. The laws of nature—that is, that which we designate thus—are commands which we promulgate after we have seen that the action or refraining from action to which they apply, has already taken place.

We consider it a matter of course that those phenomena which we have always observed should continue to be repeated, and we would be extremely astonished if they were to cease occurring, and be replaced by others differ-

ing from them in kind. This is another proof of the lack of consistency in our habits of thought. If we were logical, we should be astonished at each repetition of them, and consider the deviations matters of course; we should wonder at the regularity of the occurrence of the phenomena, and only regard the lack of regularity with passive indifference. For our senses teach us that each phenomenon is independent, and confined to itself alone, with no perceivable connection with any other phenomenon; it is then much more natural and reasonable for each phenomenon to be apprehended by the senses as new and original, instead of renewing and impressing afresh upon them what had been previously apprehended. As every phenomenon is something individual in itself, how does it happen that it bears a certain resemblance to certain others? The law of nature—that is, the pretentious determination of the fact that phenomena are repeated, is not the explanation of this fact, but the mystery of it.

When I was a small boy I used to know and play a game that seemed very fascinating to me then. It consisted in the dotting of arbitrary points on a white sheet of paper by myself or one of my playmates, which the other would then unite with lines drawn in such a way that a rational figure was produced. One of my small comrades showed especial proficiency in this game. However maliciously and wildly I placed the points—a whole crowd of them in one corner and none at all in another, or a whirlpool of them, or a number of them at regular intervals—he always succeeded in producing something with his connecting lines that had some meaning, a lion, for instance, another time a house or a whole battle scene with the most remarkable incidents depicted in it. He even carried his art so far as to connect the points with different colored inks in various ways, so that the same points formed red dogs,

blue swallows, green brooms and yellow Alpine landscapes. Our theories in regard to the universe are nothing but this game, carried on on a large scale and with tragic earnestness. The phenomena of which our senses apprise us are the given points. They do not represent anything rational, and there is nothing to show any comprehensible connection between them. They are Chaos and Tumult. But, patiently and artistically, we proceed to draw lines from one point to the other, and behold! certain figures are the result, which resemble in appearance something already known. Those who do not know how it was done might believe that the figures had been drawn on the paper from designs previously outlined by the points. They must then be shown how that which first made figures out of the points was added by human hands, and that the point as it stood alone on the paper, was mysterious and unintelligible, solely its own aim and purpose, until the line was drawn to connect it with the next point, and include it in the sketch of the figure evolved in the brain of the boy playing the game. Philosophy is always doing what my playmate used to do: it connects the same given points, with inks of different colors, so as to form the most diverse figures, and every theory in regard to the universe, every system of philosophy, produces a different picture in the connecting lines it draws between the same mysterious and unintelligible facts which have been observed, and if I am compelled to do so, then I will frankly admit that each system and each theory is equally legitimate, that is, equally arbitrary and subjective, only more or less pretty or artistic.

The names we have invented for our arbitrary generalizations sound well and they make their appearance in a manner to inspire confidence. We speak of hypotheses, of the laws of nature. What is a hypothesis? It is a line

we draw from some given point in any direction we choose. What is a law of nature? It is a line that connects two given points and is extended further in the same direction, into the unknown, into the infinite. One single fact observed is all that we require to generalize it into a hypothesis, which can not be proved and which can not be refuted, and which can extend from the fixed central point to any or all of the points of the compass, as may suit the fancy of the generalizer; two observed facts, between which a similarity can be detected, are all that we need to formulate them as a law, which we assume will determine the conditions of succeeding phenomena into all infinity. It is all the game of my childhood's days—drawing coherent figures by connecting independent points!

And yet—it does no good, we can not do without generalizing. We know that it is arbitrary and we know that it is deceiving us, that it palms off on us what is really the past, claiming that it is the future, what is remembrance, as divination, that it proclaims as experience what is merely the imagination's patchwork. We know all this, and yet our organic incompleteness compels us to use it constantly, and we must even concede that it is, perhaps, the fundamental prerequisite of all our knowledge, and certainly makes it much easier to acquire. Every perception is more distinct in the consciousness if it is associated with a recollection which it revives. When we have seen an object frequently and thus engraved it upon our memory, so that we can picture it in our imagination with our eyes shut, a brief and fleeting glance at it is all that is necessary for us to perceive it with the utmost distinctness, while we would be obliged to look much sharper and closer at another object, entirely unfamiliar to us, and observe it much longer, to obtain an idea of its appearance anywhere near as distinct as that we have of the first object. It is



owing to this cause that we read our own language so much more easily and rapidly than a foreign language with which we are unfamiliar, although it may be clothed in the same letters, and be under the same conditions of type, paper, light and distance from the eye. For this reason we recognize a friend at a distance in which we would hardly be able to distinguish the features of a stranger. Wundt is the one who has presented these facts in an excellent manner in his work on logic, and classed them among the conditions of the association of ideas. Very few phenomena produce an impression upon the senses the first time we happen to meet them, distinct enough to enable the consciousness to evolve a clearly outlined idea of them. We must perceive them repeatedly, and impress them upon the memory. What we see or hear of them after this is far less the phenomena themselves, than the image of them retained in the memory, which they conjure up before the mind. This is true to such an extent that our organ of thought frequently misconceives and confounds things. For instance, if we find some quotation or extract in some foreign tongue, with which we are thoroughly familiar, in the midst of the German or English text we are reading, we feel impressed as if the quotation were also in our own language. "*Sunt denique fines!*" stands there, and I read it in my mind as: "There is a limit to everything." The glimpse I obtain of the Latin words is but fleeting, and my consciousness does not perceive their actual form, but only the idea of their meaning, which is supplied forthwith by the memory aroused by the impression on the optic nerve.

This mechanical process of the mind explains why generalizing sometimes facilitates the perception of phenomena. We have in our memory the picture of a certain phenomenon we have previously observed; we elaborate

from this picture a *schema* or law of formation for the object; if now merely the tip of a phenomenon, resembling it in any way, appears before our senses, we have all that is needed to call up the picture in our memory before the consciousness, when we at once can apprehend the phenomenon in all its details. But while this process facilitates our task, it is at the same time the source of many errors. For it leads us to believe that we see "There is a limit to everything," before our eyes, while in reality, "*sunt denique fines!*" is printed there; that we bestow more attention upon the inward *schema* than upon the external phenomenon. But, on the other hand, we would pass by untold numbers of phenomena—which in this way we perceive at least defectively and mistakenly—without noticing them at all, if we had not already a schematic outline sketch of them in our minds.

We can assert without exaggeration that, as a rule, we see nothing but what we have already seen, and what we expect to see. As soon as we have generalized any phenomenon, which has produced enough of an impression upon us to attract our attention, into a hypothesis or law, a whole multitude of facts force themselves suddenly upon our vision, which before this we had never noticed in the least. Davaine and Villemain observed that certain microscopical organisms make their appearance in the blood of animals affected with mortification of the spleen, and that tuberculosis can be transmitted from one animal to another by the bodily discharges. Ten years have not passed since this, and bacteria have been found in fifteen or sixteen different diseases in man and animals, and in about a dozen different forms of fermentation occurring outside of the organism, of which the bacteria are the cause. A physician observes a new disease which has never been seen nor described before him. In a few months a hun-

dred cases of the new disease are reported by different physicians, who happened to run across them in that brief space of time. Heidenhain discovers that certain susceptible individuals can be thrown into a strange condition which he calls hypnotism. We know now, barely seven years afterwards, that about every fourth person is capable of being hypnotized, and we stumble against some hypnotic phenomenon at almost every step. Did they not exist before this? Certainly they did. But we never perceived them. Why? Simply because we had no previously drawn picture of them in our memory. In this way generalization is valuable to us. As we deduce a conclusion in regard to some fact, of which as yet we know nothing by actual experience, from one already cognized by the senses, we summon up the latter in reality before us. Phenomena are constantly swarming all around us, but they wear magic caps which render them invisible to us. We tear the magic cap from their heads with our hypothesis. The law of nature is the hunting dog with which we track out the cunningly hidden phenomenon. The danger is only that the dog is apt to "set" some sleeping game-keeper, instead of the partridges we are stalking. This is a mishap that sometimes occurs even with the best English setters. The majority of human beings are inexact observers because their brains are not able to consider anything with sufficient attentiveness. They see only, therefore, what they desire to see. As soon, then, as some hypothesis dawns upon their vision they construct an image of phenomena, with its assistance, and apply this image to everything that comes before their eyes, to such an extent that they see nowhere any facts which do not seem to conform to their hypothesis. Here is a single experiment which any one can try for himself. Draw four lines of equal length and equal blackness, as far as this is

possible, upon a sheet of paper or a slate, in such a way that they all cut each other in the middle and at right angles, and form a Latin (an upright), and a St. Andrew's (an inverted) cross. Look at the figure thus drawn, with the predetermination to see in it only one of the crosses, the upright or the inverted. You will find that the cross you are looking for, will stand out more prominently from the paper than the other, which although drawn with equal distinctness, will look subordinate, paler and more insignificant, seeming to be merely a modest appendage of the former. Some false hypothesis which happens to be the fashion, will procure materials in enormous quantities to prove its correctness and, based on an apparently firm foundation of facts apprehended by the senses, will prevail for tens and hundreds of years, until some stronger brain comes along, capable of greater attentiveness, and able to observe phenomena with his senses rather than with the finished pictures his memory supplies to his consciousness, who discovers that the phenomena do not conform to the hypothesis.

I can not imagine any more amazing instance, relevant to the subject, than that philosophers could discuss and wrangle for centuries as to whether the inductive or the deductive method was the one to be preferred. Induction is the process of observing facts without prejudice, and drawing conclusions from them, which are afterwards combined into a general law; deduction is the process of inventing some general law in the mind, and applying it afterwards, haphazard, to the facts. Bacon of Verulam, is recognized as the father of the inductive method; the scholastic philosophers of the Middle Ages are considered the best examples of deductive reasoners. But at bottom, the whole matter is merely an idle playing with words which all mean the same thing. How does one pro-

ceed to form a deduction, that is, a generalized conception of objects? Of course only by receiving some impression on the senses of these objects, even if it be but a fleeting impression; by observing the objects, even if very superficially. The wildest ideas we can imagine in regard to phenomena can not be conceived until after we have perceived the phenomena. They are thus inductions, nothing but inductions. And what is induction? It is to draw a conclusion from some impression on the senses. It is the elaboration of some fact actually perceived into a *schema*, a generalized law, a finished conception, with which the mind is ready to receive all similar facts in future. This finished conception, which we already possess before the new impression arrives, which is not deduced from the individual phenomenon, but from some preceding one, with which in reality it has nothing whatever in common, is deduction, nothing but deduction. So you will please spare me all your argumentation, for it does not mean anything at all. All our thought is always induction and deduction at the same time; it commences with impressions on the senses and perceptions, that is, with induction, and it proceeds to generalize it, to elaborate it into ideas preceding the impression ever after, that is, to deduction. The astronomer, calculating the orbit of a planet in accordance with Newton's law of the attraction of gravitation, and the Congo negro, who believes that Europeans dwell in the depths of the sea, and rise to the surface when they wish to come to him, because he sees the tips of the masts of an approaching vessel appear first above the horizon, followed gradually by the lower parts, and a departing vessel gradually vanish in an order the reverse of the former, until the tips of the masts are last lost to sight, reason in identically the same inductive and deductive way. Both observe phenomena and deduce a

hypothesis from them. Both add certain attributes to the facts apparent to the senses, which in reality do not belong to them, which they have not actually perceived in them, as they have no existence save in their own imagination. We say, to be sure, that the astronomer is right and the Congo negro, wrong. But what criterion have we for this? The hypothesis of which the astronomer avails himself agrees with all the facts of which we are cognizant, while that of the Congo negro does not. If the latter knew that the European is constituted as he is himself, and that it is impossible for him to live in the depths of the sea; if he also knew that the earth is round, and that the curve of its surface is what gradually intervenes between him and the sight of the departing vessel; or if he should go once to Europe himself, he would understand that he had been mistaken, and would find another hypothesis to account for the phenomenon of the ship's gradual vanishing from below, and its gradual appearance from the top downwards. And who knows whether we do not content ourselves with the astronomer's hypothesis, for the simple reason, that we accept it as truth because we do not know the facts which contradict it! Who knows whether we would not be obliged to abandon it altogether if our knowledge were increased by facts! Who knows whether better informed men may not some day smile as contemptuously at our present hypotheses, as we smile at that of the Congo negro, notwithstanding the fact that it is thought out by the same method as the attraction of gravitation, notwithstanding that it is founded in the same way upon the observation of phenomena apparent to the senses: the sinking into the sea of ships sailing away from the land, and the issuing forth from the sea of approaching vessels, notwithstanding the fact that it is thus actually inductive reasoning.

All men follow the same method in their thought, the

Congo negro, even the Australian diggers, the same as the erudite professor of physical sciences. That which alone constitutes the difference between them, is the number of facts known to them and their ability to observe accurately, that is, the degree of attentiveness possible to them, which is, on the other hand, an evidence of the greater or less development of their brains. The more attentive we are capable of being, the greater the accuracy with which we will apprehend phenomena; the more facts we know, the easier it will be for us to avoid ascribing imaginary characteristics to them, the incorrectness and impossibility of which is proved by other facts. But we have all this tendency to generalize the single phenomena apprehended by us, to associate them with others, without there being any connection apparent to the senses between them, and to attribute certain characteristics to them which they do not possess. This habit of thought—the consequence of our organic imperfectness—is the source of all our errors. If we allowed phenomena to produce their due effect upon our senses without interfering with them in any way with the finished pictures, supplied by the memory, of other phenomena which have previously occurred, bearing a more or less superficial resemblance to the former, we might not know much, but we would not fall into errors; we might overlook or imperfectly apprehend certain facts, but we would not interpret them wrongly; we should have but few ideas in our consciousness, perhaps, but none of them would be erroneous; for the error is never in the perceiving, but in the interpreting, and it is the latter which does not pertain to the phenomenon, but which we add from our own resources, which the senses do not communicate to the brain, but with which the brain deludes the senses. We cling to our defective habits of thought, however, because they inspire us with an agreeable sensation of intel-

lectual wealth, by filling our consciousness with a crowd of ideas, which do not allow us to divine, by any inherent characteristic, whether they are correct or incorrect, whether they are *schemas*, or realities.

An Irishman well known as a beggar throughout the whole of his village, walked into a tavern one day and ordered some roast pork and a large glass of whiskey. When his host expressed his astonishment at this extravagance, Paddy proudly rejoined: "A man who has in the neighborhood of a hundred pounds a year for his income, can surely afford it." "What, have you an income of a hundred pounds a year?" "Certainly, an English gentleman whose valise I just carried to the depot, gave me five shillings; and five shillings a day amounts to a hundred pounds a year."

Every time we generalize any perception, we are doing just what the Paddy of this story did, and it may be possible that our wealth in knowledge is really no more substantial than the hundred pounds income of this Irishman who reasoned according to both the inductive and deductive method.

## WHERE IS TRUTH?

It happened one evening at a party that I found myself seated beside a lady belonging to what is called "the moneyed aristocracy." As it was imperative upon me to entertain her in conversation, I was of course obliged to speak of those things in which she was interested. We had soon arrived at her last trip to the watering places, and she was describing with enthusiasm how delightful her visit to Trouville had been, where she had exhibited startling toilettes during the day and played baccarat in the Casino at night.

I ventured the inquiry as to whether she could not imagine some better way of occupying one's life.

"No," she replied decidedly: "when we are doing what affords us complete and perfect enjoyment, we are doing just what it is right for us to do."

"But do you not think," I inquired further, "that those people are to be pitied who find their complete and perfect enjoyment in toilettes and nights spent in playing baccarat?"

This remark on my part was undoubtedly impertinent. I received the sharp reply: "*Mon Dieu*, we can not all of us write books!"

"Very true. But is it not perhaps a nobler and more dignified way of employing one's time to write books than to exhibit toilettes and play baccarat?"

"By no means. One is no better than the other,

Writing books amuses some people, doing the other amuses others. I see no difference between them."

"But surely the majority of people are not of your opinion?"

"I do not know about that. And besides I do not care. In *my* world every one thinks as I do, and I am perfectly indifferent to the opinion of those who are not in it."

"But the best and the foremost people rank intellectual occupations higher than playing cards and gossiping, and the writer of books is ranked higher in the state and in society than the baccarat-players and those who display magnificent toilettes."

"Do you think so?" she rejoined in an indescribable tone. "I have never noticed that this was the case. Wherever I have been I have always found that those whom you call baccarat-players and toilette-displays were regarded with more respect and consideration than the writers of books."

I was as totally routed as it is possible for a man to be, and was obliged to acknowledge my defeat. Here were two antagonistic points of view, and each considered itself the only correct one, and neither could overthrow the other. The reasons upon which each were based had no power to alter the other, and not one of these reasons bore any unmistakable token of absolute correctness and superiority which could compel every single human mind to recognize it as truth and everything contradictory to it as error.

I am acquainted with a lady who is very ugly and even deformed, (she is lame,) and whose brain is below that of one of the more intelligent poodle dogs, by the lengths of several goose heads. But she enjoys the society of gentlemen, and of course knows how to provoke



attentions from them by her frank advances. They see at once that she enjoys compliments, and that she can bear any amount of them, and as compliments are now even cheaper than blackberries in Falstaff's day, they give her all she wants of them. She is now nearly forty years old, and she has never spent an unhappy hour in her life. She is firmly convinced that she is the most beautiful, the wittiest and the most fascinating embodiment of femininity in the world; that every man who looks upon her falls desperately in love with her; that even her deformity enhances her irresistible charms. The gentlemen all tell her so, because she insists upon their telling her things of this kind, and she believes what they say. She has never heard a dissenting opinion. If other ladies do not share the raptures and the admiration of the gentlemen for her, this does not affect her self-appreciation in the least; these other ladies are her enemies because they envy her. Nobody will ever inform her that she has been a butt of ridicule to the gentlemen all her life, and she will say to herself on her death bed: "My life has been one long, entire, endless, incomparable triumphant procession, and with me dies the woman whom all my male contemporaries pronounced the most beautiful, the wittiest and the most fascinating of her generation." This will seem the absolute and entire truth in her eyes, and nothing will ever arouse the slightest suspicion in her mind that she may have been the victim of a delusion.

The idea occurred to some young men in Paris, collaborators on an obscure penny sheet, in February, 1881, to make themselves conspicuous and notorious. They concluded to institute a "National Apotheosis" for Victor Hugo. They began by forming themselves into a "Victor Hugo Celebration Committee," and appointed a large number of really distinguished personages—of course without

having previously consulted them—to be members of this committee. The imposing list of names was published in all the daily papers. The latter did not dare to refuse the advertising notices, which poured in upon them from the committee during the ensuing month; for who wishes to have it said of him that he is not patriotic and has no sympathy for an illustrious national personage? The public was made to believe that the subject under discussion had originated spontaneously in a hundred thousand different minds; the authorities were compelled to take a personal interest in the arrangements. The movement even carried along with it a number of naive and notoriety-seeking people in foreign countries, who utilized this opportunity to see their names in print in the Paris journals. The grand demonstration took place on the day appointed. Some fifteen thousand people marched past Victor Hugo's residence; of these about two thousand were peddlers, who wanted to do a little business selling medals, badges, poems, etc.; ten thousand were simply curious spectators who wanted to see the fun, less than half of whom perhaps, had ever read a single volume of Victor Hugo's works; and, finally, perhaps three thousand harmless, really sincere individuals who had allowed themselves to be wrought up into a genuine frenzy of enthusiasm. The next morning we read in all the Paris papers that five hundred thousand persons had saluted Victor Hugo with rapturous cheers, that Paris had had a celebration unprecedented in the history of the world, and that all civilized humanity had combined with France to offer homage to the greatest poet of the century, such as had never been offered to mortal man before. The foreign papers reprinted this, the legend was distributed all over the globe, and is now considered everywhere—even in Paris itself—an unassailable fact. Future historians of our civilization will comment upon it, and seek

in vain in contemporaneous sources for anything implying that the affair did not proceed exactly as the press of both hemispheres described it.

And in such a condition is truth, when it refers to an event that occurred before the eyes of several thousand witnesses!

But do we fare any better in events of a less transient character than the above? What do we know of the circumstances of nature, in the midst of which we live? Those facts, apparently the simplest, and those laws, which we consider the firmest and the most securely founded, sway perilously beneath the foot of the investigator; the semi-educated alone, who receive their scientific knowledge with confidence and ready belief from the hands of inexact compilers and popular lecturers, believe, that they possess reliable and unassailable truths, while those who are really learned, who obtain their knowledge of facts from the fountain-head, know that there is perhaps not a single one that is established with such certainty that it can not be called into question. We discourse fluently—and often with vast self-satisfaction—of the distance of the earth from the sun, and even from Sirius, while in fact, we do not know even the length of the line between the Washington and the Cape Town Observatory. There is a difference of more than a mile, or about one ten-thousandth of the whole distance, between the calculations made by the greatest astronomers of the age, with the aid of the most perfect instruments and most approved methods. The exact length of the astronomical day, that is, the actual time required by the earth to complete one revolution on its axis, is not yet definitely settled, neither the exact position of this axis, that is, the angle formed by the axis of the earth with its orbit. The estimates of the heat of the sun vary by 200 to 20,000 degrees, and so distinguished an

investigator as William Herschel could propound the theory that the surface of the sun's nucleus was solid and inhabited by living beings!

The natural sciences have thus so far not been successful in closely approximating truth, and certainly not in establishing it beyond a doubt. And this too, in regard to phenomena which are continually being repeated before our eyes, which do not change in any way perceptible to us, which are patiently waiting for man to pursue them, seize them, imprison them in some invention, pinch them with tongs, feel them over with fingers and instruments, turn them around, empty them out, gaze at them inside and out, and do anything and everything with them that may seem necessary and useful to him. What is to be said then of the historical sciences which profess to discover the real meaning of such phenomena as have occurred ages ago, of which nothing is left in our hands and before our eyes but some half-effaced footprint on the deep sand, or an indistinct echo, or even less than this.

I will not be unjust to the science of history. Its position in the encyclopedia of science is remarkable and unique, as, contrary to all the rest, it does not work by generalizing, and knows neither hypotheses nor laws of nature. It is the only one which conforms to the conditions of knowledge detailed in the preceding chapter; it endeavors to comprehend and portray phenomena as they really were perceived by the senses, and strenuously avoids adding any characteristics of an immaterial nature, which are not in them. As the phenomenon is only what actually did happen or exist, and the interpretation, the generalization of it, the association of it with other phenomena,—simultaneous, previous or succeeding—its deduction from causes outside of it, the tracing of it back to some law or laws, is what is arbitrarily added, as the perception of

the phenomenon by the senses is all that communicates any knowledge of it to us, while every supposition, everything we ascribe to it, etc., exposes us to a possibility of error—it should follow, that history which confines itself exclusively to retaining the phenomenon and avoids ascribing anything to it, and abstains from all suppositions of any kind, from principle, ought to be in reality the most reliable of all the sciences, the one containing the largest number of truths and the fewest errors, and including the greatest quantity of material phenomena, and the least amount of subjective imaginative work. Contrary to the science of mathematics, which can easily be subjectively true, because it is nothing but one form of human thought, and has nothing to do with external events, apparent to the senses, devoting itself exclusively to those that occur in the consciousness itself and are apprehended without the intervention of the senses—contrary to mathematics, I say, which is subjectively nearest to the truth, history should be objectively nearest to the truth, because it does not treat of what is possible or probable or what impresses us as necessary, but exclusively of what is real, that is, the event or phenomenon, because its subject is not subjective assumptions, but objective phenomena. Yea, it should be! History would be all this, if the human organ of thought were not the defective apparatus that it is. On this defectiveness it is forever being shipwrecked; all its endeavors to attain to the objective event are fruitless on this account. History strives to portray occurrences just as they actually took place; but, when most successful, it can only portray them as they were perceived. But the conditions of all our intellectual work are such that the perceptions of the events can not be identical with the events themselves. For either the perceptions are so insignificant that they do not arouse us to a state of attentiveness, and hence

are not apprehended with distinctness, do not reach the consciousness and do not engrave any clearly outlined picture of the event upon the memory; or they are important, and in this case the incipient phases arouse the attention to such an extent that the nerve-force is exhausted at once, the brain loses its ability to perceive, and the succeeding phases of the event glide past the eyes of the witness as if in a confused dream. It is a consequence of this fact that no one who takes part in any great event, a battle, a *coup d'etat*, an exciting parliamentary debate, for instance, ever retains in his memory an exact picture of the whole affair from beginning to end. A thousand witnesses of any event, taken at random, would describe it in a thousand different ways, which would each contradict the rest in the most essential points in the most astounding manner. Nothing but a machine run by clock-work, which would expose a fresh sensitized plate every second to the event as it was occurring, and thus obtain an uninterrupted series of instantaneous views, could at least record its optical aspect. Our organism is not a machine of this kind. We have not an endless series of continually fresh photographic plates, but only a very limited supply of them. When these are used up we confront the event like a photographic apparatus, the plate-holder of which is empty, and we are obliged to rest before we can prepare any new plates. For this reason those who take part in an event are the most unreliable observers of it; for this reason the testimony of eye-witnesses is only true subjectively; for this reason history is without means to reconstruct afterwards with the aid of human, subjective perceptions, the absolute and objective truth of the events.

Of course I have been referring only to simple history thus far, which only relates the event, without making any pretensions to explain it. It is the history written by the

chroniclers who faithfully record that it rained on the first day of the month, that a battle occurred on the second and that a new pope was elected on the third. The modern historical investigator, however, has abandoned this primitive point of view, which made it at least theoretically possible to apprehend truth and avoid error. The modern historian not only wishes to record facts; he wishes to explain them also. Of course history as a science has not been able either to escape that universal habit of thought which impels us to add transcendental characteristics to material phenomena, to impute laws and ascribe some antecedent cause to them, that is, in short, to play the game of drawing figures by uniting points by arbitrary lines, and the boldest supporters of this science are almost willing to transform it into a system of philosophy by schematizing its subject, as natural philosophy schematizes the phenomena of nature. They would like to refer the operation of events of which humanity has been the stage, to the universal laws of nature, to invent hypotheses and formulas for them, and with the aid of these to prophesy the course of events in the future, as we now venture to prophesy with the aid of the formulas, hypotheses and laws of our physical sciences, that the sun will rise tomorrow morning and that the trees will blossom in the spring. And they are right, besides. There is not a single reason why human events should be treated any differently from any other phenomena occurring in the universe. Is not man, is not humanity in general, a part of this grand whole as much as the quartz rock, the meteor, the palm-tree? Is not a human thought or action an organic process just the same as digestion or reproduction, as the migration of the birds or the winter sleep of the rodent; is not human thought or action as much a dynamic process as the fall of a free object or the revolution of the moon around the earth? If

we claim the right of not confining ourselves simply to describing these organic and dynamic processes, but of schematizing them, and uniting them by a transcendental tie of hypotheses and laws into comprehensible figures—why not apply this same method to human ideas and actions? And this is just what we do; but in doing so we forsake the solid ground of actual occurrences and what is actually apparent to the senses, and launch forth into the transcendental and speculative. In this way history first becomes rational, that is, in this way it first comes into correspondence with our habits of thought, which we have learned to recognize as the inevitable results of our organic imperfectness, but in this way, it also becomes at the same time the scene of action of all the subjective errors of our organ of thought, as every event has but one form apparent to the senses, while, on the other hand, the number of the transcendental suppositions which the human mind can invent and ascribe to it, is actually unlimited, and actually unlimited, therefore, is the number of possible errors.

A certain school of historiography explains events by the persons who took part in them. It attributes to external influences merely the rôle of an impulse, and locates the actual motives and motive powers of historical events in the minds of the leading personalities of the age. From this point of view the science of history becomes psychology and the writing of history, biography. In this case mankind can be considered almost entirely independent of nature, and the historian may discard all ideas connected with any general laws of nature or any changes in their equilibrium, which may have had any influence upon other organisms, and thus also upon peoples and human beings. With this for his point of view the historian is correct in writing history by anecdotes and in allowing the decline of great empires to depend upon the state of some general's

digestion. Then Helen's beautiful eyes were the cause of the Siege of Troy; the French were defeated at Sedan because General Wimpffen had incurred the enmity of Marshal MacMahon in 1869 in Algiers, by escorting a woman of doubtful reputation to a charity fair presided over by the wife of the latter; and Scribe's comedy, "A Glass of Water," contains the real explanation of the reasons why the War of the Spanish Succession proceeded as it did and not otherwise. If we go a step farther, and agree with Wundt that the force which produces the operation of the human consciousness and evolution of ideas, resolutions, etc., is undetermined, viz., that it is not the result of impulse from without, and is not in direct proportion to the strength of this impulse, then the last connecting link between man and the forces which operate outside of him is broken, and a history which confines itself exclusively to psychology, accepting Wundt's theory, can represent each event as the outward manifestation—not traceable to any cause nor dependent upon anything external—of some accidental and arbitrary process in the mind or heart of some influential individual.

Another school of historians sees in events the operation of the general laws of nature. I will call this school the natural philosophical one, to distinguish it from the psychological described above. From their point of view one people makes war upon another because it is hungry, and not on account of some whim of its king or commander. The individual loses his influence and is lost to sight in the surging masses. He thinks he is pushing, and he is being pushed. Proper names cease to have any value or significance and might be struck out from history entirely. Peoples act and endure as the trees blossom in the spring and shed their leaves in the fall; the events in history are the expression of the operation of cosmical laws, and the

destinies of nations are not determined in some beauty's boudoir, nor in the study of some talented prime minister, but very suitably by the stars. Astrology is sustained in an unexpected way—not as it is practiced in reality, but as a theory, a dawning of the actual relations of things, and we must no longer smile when we hear uneducated persons express their apprehension of wars, at the sight of a comet. We may even be justified in believing that the appearance of spots on the sun coincides with the great commercial crises! Of course we do not imagine that the spots on the sun have any direct influence upon the prices in the markets, or that they suppress in man all inclination to buy; we do not assume the effect to be in any way direct; but we do not know the intermediate links in the connecting chain, only the beginning and the end of it. Why then should it not be possible to imagine that the astronomic phenomena, the processes occurring in the sun, the planetary system, and in the universe, might ultimately produce certain states of excitement in man, and thus lead to wars, revolutions, and epochs of progress and decadence?

It is not necessary to confine ourselves so exclusively to either of these two points of view; we can stand with one foot upon each, and say that the general laws of nature are in fact the motive power in historical events, as they are in all other phenomena, but that the direction in which this power is applied is determined by isolated exceptional beings. This allows individuality to resume its traditional right to a partial extent; it does not create history as a poet evolves dramas out of his imagination, but it guides the course of nations as an engineer drives his train along the given track, making the locomotive run faster or slower, or stop entirely, as he may choose. The genius is then an experimenter with humanity on a large scale; he does not create his marvels any more than Harvey created



the circulation of the blood, but he discovers the natural laws which prevail among peoples, and he tests them by applying them. From this point of view it is easier for us to comprehend how "the world is governed with but little wisdom," as the world would be governed by the laws of nature, and those who apparently govern it have only to refrain from interfering with them.

Here are three hypotheses; each one of the three is equally plausible and equally arbitrary; neither of the three can be refuted, and neither proved. They can not all three be true at the same time, but they may all three be incorrect. What confidence then can we have in a science which necessarily must be founded upon one of these hypotheses, and therefore may possibly be founded upon an erroneous one, in any case? Here again a deadly dilemma has us between its horns. History is either purely objective and represents events exclusively as they really occurred—in which case it is meaningless, as it is impossible for it to portray events in objective actuality,—or else it is subjective and hypothetical and endeavors to explain and impute causes, which do not form an element of the event perceivable by the senses,—in which case it ceases to retain even the semblance of truth, and may be merely a tissue of individual errors, from the first to the last word.

Analyzing the phenomenon is generally considered the best way to approximate the truth as closely as possible. Is this way efficacious after all? There are grave doubts upon this point. Analyzing the phenomenon may not lead to the discovery of the essence of it, but it certainly does destroy the phenomenon. Let us take quite a superficial example to illustrate this. I see a man in the uniform of a soldier. Without the least hesitation or vacillation I am immediately induced to assert, here is a

soldier. Now I begin to analyze the object. I remove the uniform. What is it that I now see before me? No longer an object with distinct, marked characteristics, differentiated, but something more indistinct and more general, a man of the Caucasian type. If I deprive him of his skin, then he is only a man in general, hardly to be distinguished from a negro or an Indian. If I carry my analysis still further, and place a fragment of his muscle under my microscope, then I can only say that the object was an animal, but am unable to tell from it whether it was a man or a white man, much less a soldier. If, in conclusion, I resolve the muscle into its chemical elements, then I have nothing left of the original object, distinctive or essential, and all I can say is that it consisted of the different kinds of matter which are found in our planetary system. And thus with my implacable and continually progressing analysis, I have finally succeeded in reducing a soldier—an object clearly to be recognized and defined, which it would be impossible to confound with anything else—into a little oxygen, carbon, etc., which might have come just as well from a nebula or a Havana cigar. All the properties of material objects which we perceive with our senses, are movements. Those movements which alternate not less than twenty and not more than ten thousand times in a second, we count with our auditory nerves, and perceive them as sounds; those which are repeated between five hundred thousand and three hundred million times in a second, we count with the optic nerves, and apprehend as light and color. We have no organ to count those movements which occur between ten thousand and five hundred thousand times in a second, nor those below twenty and above three hundred million, and hence we fail to perceive them. The perception of an object is therefore, nothing but the counting of the movements;

hence all objects are essentially identical, and only differ by the number of the movements. This is the result of an analysis carried to extreme lengths. Very fine. Thus the beautiful and the ugly, the bright and the dark, the delightful and the distressing, are all nothing but motion, a slower or more rapid motion. But how does it happen that these different forms of motion, which are after all entirely the same, impress me differently; that one is agreeable and another disagreeable to me, that one affords me gratification, and another cause for distress? This brings me to the same point as in my analysis of the soldier into his simple chemical elements. I have sacrificed the distinctive, intelligible and special characteristics of the phenomenon, and after all, have failed to learn the essence of it in return.

Such experiences make us distrustful and lead to the supposition that we have stated the problem erroneously from the beginning. In our search for the essence of things we destroy their outward appearance. Is not the phenomenon itself the essence, and when we are analyzing it are we not doing like the child who, curious to see what is inside the onion, peels off layer after layer and when it has thrown away the very last, has nothing left in his hand? This is not denying the theory of the "thing in itself," but seeking it on the surface of the phenomenon, and not in its secret and inaccessible depths, and identifying it with the phenomenon. We strive further for absolute, objective truth. But who can tell us whether our very premise may not be an erroneous one? Whence do we derive our knowledge that there is such a thing as absolute, objective truth? What if the unknown agency which produces the impressions upon our senses, did not become a distinct phenomenon except in our organism, and had no existence, as such, outside of it. The fact is universally conceded at

the present day that phenomena possess neither colors nor sounds, neither odors, nor heat and cold, outside of our organism, but that all these properties are added to them in our organism. May not this same fact apply to the whole course of phenomena? If this be so, then phenomena would have no form apparent to the human senses except in the organism; then there would be no objective and absolute truth, but merely a subjective truth alone, which could not be the same truth to two human beings unless their organisms were identical; then every attempt to discover objective truth would be entirely futile, and we would be more than ever condemned to seek for all our knowledge in our own consciousness exclusively, and not outside of it.

It is cold up here on these mountain peaks of thought. I am shivering. We will now descend into the less elevated regions where we will be nearer the plainly practical but comfortably warm everyday life of humanity.

## THE STATE AN ANNIHILATOR OF CHARACTER

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The German system of ranks and titles has been held up to ridicule a thousand times, and the treatises in prose and verse which satirize it form a whole literature in themselves. But the subject is by no means yet exhausted, and certain phases of it have hardly been alluded to. Thus no one has pointed out with sufficient emphasis, the danger that threatens the development and even the existence of a nation, when it installs the mandarin's button, the insignia of his rank, as its private and public ideal.

Go into society in Germany and look around you: you will find there assessors and inspectors, registrars and professors, majors and councilors of all kinds and colors, from the humble *Kommissionsrath* to the high and mighty *Wirkliche Geheimerrath* or acting privy councilor. Every profession has its special councilor, who is its blossom, as it were, and we can only be astonished that there are a few isolated professions which have no blossom of this kind, and can thus be considered the cryptogams of the state-flora. It would be so charming if the more successful beggars and wine-bibbers could hope to pass the declining years of their prosperous career, adorned with some appropriate title such as Tramp-rath or Saloon-rath. You would seek in vain among all these Rathes for a plain simple man, satisfied with his own unadorned baptismal and

family name, even if you were aided in your search with a Diogenes lantern constructed according to the latest and most approved principles of electric lighting. The footman handing around the almond-milk is apparently the only representative of the *genus Adam homo* without some suffix, but even in this case appearances are deceptive. Whenever the State has occasion to refer to him officially, either to call upon him to pay his taxes, or to prosecute him for nocturnal disturbance of the public peace, or to pin the universal decoration of honor to his breast on account of the solicitous care he has taken of the boots of some general or privy councilor for so many years, it does not speak of him as "Friedrich Wilhelm Mueller," but adds a distinctive, "Friedrich Wilhelm Mueller, footman." This is not a title of especial honor, it is true, but still it is a title. It fills the place of a title, at least, and keeps it warm. It is a sign that there ought to be something in this place. It keeps up the habit of seeing a handle to one's name, as there is to a frying-pan. The state is modest to excess in a certain way. It shocks it to behold a naked name. What dreadful indecency! Quick, bring the cloak of some title! Or at least the fig-leaf of some specified profession! The science of mathematics, which is also very particular in regard to exactness, does without prefixes wherever it can, and asserts by previous agreement that whenever there is nothing in front of a term we must imagine the plus sign there. The state takes nothing of the kind for granted. Every name must have something by which it can be taken hold of. Anyone who is nothing more, obtains the title of "private citizen," at least. How characteristically German that soul-impassioned cry of the man described in the *Fliegende Blätter*, who exclaimed: "Even if I am nothing else, I am at least a Contemporary!"

When you are introduced to a gentleman as Herr Rath So and So, you know everything about him that you need to know. You need not take any trouble to become acquainted with his personality; you need not even look at his face and, much less, notice his name. These things are of secondary importance. What is essential is the fact that he is a Rath. This is the complete definition of the man. You can draw conclusions with infallible certainty, from his title as to what he is and what he does, what he has learned, what are his likes and dislikes; how and where he spends his days and nights; what are his opinions on every subject, from free trade to the immortality of the soul; and even in many cases the amount of money he earns. The sensation one experiences in meeting a man thus betitled, is one of delightful security. There is no annoying veil to conceal the features of a mysterious Isis. Maya stands before you satisfactorily visible, and leaves you nothing to seek, nothing to surmise. I am only astonished that no one has thought of a system of simplification which has many practical points to recommend it. What is the use of leaving any proper name to these titled gentlemen at all? The proper name reminds you after all of a personality, but the highest triumph of these gentlemen is not to have any personality; but to have rank, position, a title. These are the main thing; the man, himself, is merely an unessential appendage. Very well, let us suppress this appendage entirely, and designate each title-bearer only by the number of the page and line in the state records, the peerage book or in the army roll, where he is inscribed. Or if this may seem to have disadvantages, then let us give him some settled, easily remembered name, to be borne for ever after by all those who fill a certain position, and to be conferred simultaneously with the title. Then when a man assumes his

uniform he assumes a name also, and vanishes in his rank and title to the last hair on his body. The *grand seigneurs* of France in the last century reduced living to a science. They had one settled surname for each footman, and any man entering their service was obliged to answer to this name. The valet was called Jeunesse, for instance, the game-keeper, Picardie, and the coachman, Victor; each assumed the name with the livery left him by his predecessor, and bequeathed it to his successor, and thus their masters, who were not interested in distinguishing personalities, but only in seeing regular menial duties regularly performed, saved themselves in this way the necessity of taxing their memories as far as the servant's hall was concerned.

The matter would not be so serious, however, if the public officials were the only ones who experienced this childish delight in their titles, and ascribed more importance to their uniform than to their person. But this phenomenon is by no means confined to those circles in which the title corresponds to at least some kind of work performed, and where the uniform is not a carnival disguise but an official robe; it is found throughout the whole people and is observed in many persons who are not connected in any way with the state, except as they are enumerated in the census to form the official total population. Even in private life the German yearns and strives for official recognition in some way, some distinction or badge as a token that he is a member of the electoral herd. Until the state has taken official cognizance of his existence by bestowing something upon him, he does not believe in his actual existence. Without such a so-called distinction, he does not feel himself a complete man, at most, only as the pedestal of one. He considers his profession as the stepping-stone to a title, and believes his breast was only created for the purpose of wearing an order. Men, free-

born and independent, they have no pride in relying upon themselves and being under no obligations to anybody, but sacrifice their independence, which is worth far more than Esau's birth-right, for a favor which is more insignificant in reality than Jacob's mess of pottage. When the feudal system was first developed, free-born men were obliged to place all their possessions in the hands of the great nobles, and receive them back as a feudal tenure, like a gracious gift, from the latter. We now do without the least necessity or compulsion what was only done by the proud peoples of those days after an obstinate resistance.

In Russia the ladder with its different rounds of official ranks and functionaries, is called the Tschin. Every Russian has to stand upon some one round of this ladder, if he desires to be of any more consequence in the world than a herring in the shoal. But the Tschin has not remained exclusively a Russian institution; it has found its way over the border. The ladder has also been erected in Germany, and the world now sees the remarkable spectacle of the first and most powerful civilized people on earth, spending their days like a flock of trained tree-toads climbing solemnly from one round to the other. The individual does not develop from within outward, but by external accretions; he does not grow like an independent organism filled with vital energy, but like a dead, inert stone. The state is what adds new inches to the natural height of the individual, making him taller by a whole head from time to time. This development does not consist in any elevation of the character, but in the growth of the title in length. The personality loses a quality, the title gains an adjective. The temperament grows poorer, the decoration richer.

And woe to the man who wishes to escape from this

voluntary servitude! He is regarded by all the rest like the free wolf by the house dogs in the fable. Or, to be more exact: he is disregarded altogether. Grimmelshausen tells about a wonderful bird's nest that made any one who carried it invisible. The title produces an effect exactly the reverse of this bird's nest. It is what first makes the one who bears it visible. As long as a man is without it, he is not noticed by society, he is a shadowy outline, a phantom. He who in obedience to his own organic vigor and to his inherent law of growth, has developed into an individuality which must be considered and measured by itself alone, and can only be comprehended in its true originality and beauty when all external arbitrary additions are removed, which only serve to disturb its outlines and confuse the effect of the whole, such a man is lost sight of behind these insignificant puppets, who have no use or purpose except as wearers of uniforms and insignia of rank! The child in the anecdote said that he could not tell whether the children bathing were boys or girls, as they did not have any clothes on. Society's point of view is the same as this child's. It is unable to realize what is human unless it appears in a certain attire. It does not recognize a man as a man unless he makes his appearance in the full panoply of ranks and titles. This point of view compels every one, who has the justifiable ambition to become of some importance in the eyes of his fellow-citizens, to abandon his natural course of development and fall in with the procession as it moves along the track appointed for it by the state, with policemen to guard it on the right and left, all drowsily keeping step together. The individual thus comes to be of the opinion that his original life, as he received it from nature, is of no account, and that, to enter upon actual existence, he must be born again with the help of the state, as some public functionary, as



in India the members of the three highest castes are "Dhwitschas," that is, they must submit to some ceremony symbolical of a new birth, when they have attained to manhood, which consists of passing through some small and narrow doorway, robed entirely in white, with all kinds of attendant formalities.

What a pitiable retrogression to a stage of evolution long since left behind us! What a contrast to all the principles and impelling forces of the age! The more highly developed an organism, the more original, the more differentiated it is, and the more subordinate the position of the race in it compared with that of the individual. This law affects not merely the individuals alone but the race as well. In ancient and mediæval times, the community was organized as a solid, compact body, and the individuals had no importance save as parts of the whole. In those days it was neither possible nor suitable for any one to be original; he was obliged to conform to the carefully drawn design followed in the construction of the state, the society, the corporation or the guild. All those who had not been received into any community or privileged fellowship, were wanderers with no claim to justice, and outlaws. This stage of social development can be compared to a coral branch, in which the single individuals have grown together, incompletely developed, without any organic freedom, and can neither live to themselves alone nor move about, and never attain to anything beyond a subordinate and stunted partial existence. We have progressed beyond this. We are no longer a coral formation, we constitute now a flock. Each individual leads a separate existence, even if all rely upon each other for certain offices. The tie of fellowship that unites us all, allows us each a certain amount of liberty, and it is organically possible to us all to graze for ourselves. We sacrifice voluntarily this individu-

ation—the prize won for us by modern times—for the old collectivity, in which the single being is nothing but a cell, an organ, a moving, senseless nothing. For this is where we inevitably land when we tacitly acknowledge that a man has no worth and no dignity except as they are bestowed upon him by the executive authorities, and that his station among his fellow-men is better determined by some name or distinction conferred upon him, than by his own merits, his intellectual achievements and his acts done without consideration of the official reports.

What is the state? In theory it means: us all! But in practice it means a ruling class, a small number of dominant individuals, sometimes only one single person. To state that we place the state above everything else, means, simply and exclusively, that we are anxious to please this class, these few persons or this single person. It means that instead of developing towards the ideal implanted in us by nature, we have set up an ideal evolved by the mind of another person, perhaps even by another's whim. It means that we renounce our inmost essential being, and conform to some external pattern, possibly repugnant to all our original dispositions and tastes. The history of a nation's civilization becomes thus the record of an order, like that of the Jesuits, whose members have offered up their own reason as a sacrifice and renounced the right of thinking with their own brains and passing judgment in their own consciences upon what is right and what is wrong. We do not form ourselves according to the organic impulse within us, but complacently pour ourselves like melted metal into some mould set up for us by the authorities, and pride ourselves upon being tawdry zinc figures for clocks turned out by the dozen, instead of living beings with an individual physiognomy. This process of melting and casting disintegrates the crystalline structure

of a people and destroys its solidity. The beautiful and rich multiformity of natural development gives place to a forced, wretched uniformity. If you ask an individual abruptly what is his opinion upon a certain subject, he can not tell you upon the spot, but has first to go to the chestnut grove to get the countersign. Millions renounce their intellectual freedom, and place themselves and all their thoughts and actions under a guardianship, to whose narrow tyranny they soon cease to be sensitive.

There is no need to advance the objection that this can not be otherwise, and that I, myself, have been the very one to dwell upon the fact that the masses are incapable of original, independent mental labor, and that this is performed by exceptional characters alone, and the results of it are transmitted by suggestion from the small minority to the vast majority. But it makes an immense difference whether the thoughts of an individual or of several individuals are instilled into the brains of others by natural suggestion or forced into them by violence and compulsion. In the former case no organic process is interfered with; those alone who are incapable of individual thought succumb to the influence of the superior mind and necessarily become its echo. In the latter case, on the other hand, all natural development is prevented and suppressed, and those gifted and vigorous minds which are adapted to work out new thoughts and add to the intellectual wealth of the people and of humanity in general, are also induced to suppress, intentionally and willfully, their own cerebral activity, so that they can think the pattern-thoughts with which the nation is kept supplied by the authorities, and thus render themselves worthy of official recognition.

The difference is similar to that between the idleness of small children and the loafing of able-bodied men. One

is natural and a matter of course, with no injurious economical consequences; the other, if it is universal, reduces a people to beggary.

This general renunciation of all claim to personal independence, as a matter of course, facilitates the task of governing to a great degree. The poodle never keeps so still as when a piece of sugar is laid on his nose, and he is allowed the prospect of snapping it as the reward for waiting like a good dog till he receives permission. A people that has no respect for a man until he has received his re-baptism from the hands of the authorities in the government records, and thereby impels and even compels its more talented citizens to force their way at any cost into the Holy of Holies of the official gazette, such a people is entirely at the mercy of the government, that is, of its dominant class. The thought: "What will the authorities say?" is the constant companion of all its citizens, and peers over their shoulder even at their most private tasks, schemes and conversations. Under the incessant supervision of this overseer the citizen loses the necessary and fruitful practice of undisturbed intercourse with himself and his own conscience, and thus loses confidence in himself, and begins to act a part and be an eye-servant—the inevitable result of knowing that the eyes of a captious observer are constantly upon one. But of course it is for the interest of the government to maintain this very state of affairs. It prevents any inconvenient opposition on the part of public opinion. It lays a great nation at the feet of a minister and a few influential statesmen. It grinds down the independent men into second class citizens bearing a stigma, as they will never be able to ripen into titled and decorated men of the full stamp, and imparts to every political attempt at rebellion against the government, the character of a disgrace in

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the eyes of the masses, the character of an act which deprives the one who takes part in it, of what is considered his most valued and honored right—the right of having his button-hole decorated with a colored ribbon some day, and of adding a title to his name.

This is a state of affairs which is not only contemptible, not only immoral, but also extremely menacing to the future of a people. I think it was in Vasari where I read that Michael Angelo became so accustomed to looking upward, during the twenty-two months he was engaged in painting the ceiling of the Sistine Chapel, that he could no longer look straight forward, nor to the right or left like other men, but was obliged to hold even the writing he wished to read high above his eyes. The same thing happens to a people which has acquired the habit of always looking up, always keeping its gaze fixed upon the heads of the government. It loses the faculty of looking around and forward, freely and independently; from want of practice it fails to observe the dangers approaching from other directions. Those men who toil for the public welfare, or pretend to do so, do not notice their neighbors nor the effect of their words and actions upon them, as in the whole of their artificially limited horizon there is nothing but the image of some one person or group at whose nod and beck they dance like marionettes. They no longer have any eyes for the community; to be useful to it, to please it, is not their object, which is only to obtain some condescending gesture or smile from those in power.

I am well aware of what is usually said in favor of such a state of affairs. It is claimed that it facilitates the centralization of the whole strength of the people for great enterprises, in fact is what first makes them possible; that it prevents this strength being frittered away in a thousand different directions and allows an intelligent and concen-

trated guidance of the destinies of the nation. The inhabitant of a country whose citizens are of no account until they have become distinguished to the sight by the grand total represented in the government, feels himself constrained to dedicate his energies to this grand total, and to make himself worthy of belonging to it; selfish interests are overthrown and public spirit cultivated; a close solidarity unites all the members of a nation, and strict discipline, without which even the mightiest efforts on the part of the masses are barren of results, becomes a fundamental characteristic of the people. This is what is urged in favor of it, but it is all erroneous from the first to the last word. The strength of the whole is, ultimately, always directly dependent upon the strength of the single constituent parts. If they are weak, then all organization, all discipline and all subordination to a single guidance will not make them strong. In vain do a thousand sheep combine in the most extreme solidarity, they will never be able to withstand a single lion, nor even inspire him with fear. If all manly independence is systematically suppressed and exterminated in a nation, if all character is crushed out by external pressure, it follows in the end, that there is nothing left alive in the people as a people, and nought remains but an atomic dust through which a child might run its fingers in play. Original characters cannot develop, multifariousness vanishes, the springs of truth which used to bubble forth from a thousand separate brains cease to flow and dry up, and in going through the land from one end to the other, we meet none but regulation copies of one single figure, which has been officially announced as the only genuine and proper national type.

A people can bear deterioration of this kind for a long while in times of peace, without becoming aware of the perilousness of its condition and without seeing the yawn-

ing abyss along whose brink it is moving. It may even be so fortunate as to be governed by some powerful and enlightened mind with exalted ideals which accomplishes great deeds. In such a case everything works smoothly, the adherents of the government triumph; success seems to vindicate those who claim that the people should allow one single brain to think for it, one single arm to act for it, and the general strife for governmental patronage, which is nothing but an unconditional return to the point of view of the submissive citizen's narrow reasoning, seems to promote the prosperity of the state. But the genius can not live forever; every age does not produce a new one, and even the greatest nation is not sure of always having remarkable men at the head of its government. History teaches that in the councils of the mighty the "little wisdom" of which Oxenstierna speaks, is of far more frequent occurrence than great intellectual ability. But what if the destinies of the people fall into the hands of mediocrity, or even worse than this, of frivolity, egotism, self-interest or low vice. The confirmed habit of allowing the government to think and act for it and of honoring the opinions advanced by the authorities as infallible revelations, will continue to prevail as it has become organic; the masses will continue to regard the public official, the Rath, as the perfect man and first-class citizen; all persons throughout the different strata of cultivation in the nation will continue their efforts to obtain titles and orders, and the government will continue to bestow the evidences of its favor upon those alone whose applause is loud and vigorous. Those, therefore, who long for the respect of the masses will continue to expire of admiration and adoration of the supreme authorities; all criticism is dumb, the opposition of the independent few is without effect, and this idyl of complacent governing and admiring obeying

may continue until some night the most frightful catastrophe may befall it, suddenly and without warning. Then the consequences of this system of universal worship of the heads of the government will become apparent. The citizens will then have lost the practice of thinking of the common welfare, and of seeking in their own minds and hearts for what could promote it; with the government constantly in view they will finally have learned to confound it with the nation and the fatherland; they will have become accustomed to performing eye service for a reward and official recognition, and know nothing of winning their own self-respect and self-approval by living out their own original selves; the disaster consequently finds the whole people unprepared and defenseless, and so it finally perishes, unless it contains some sound and vigorous elements in its inmost recesses, which had found opportunity to pursue their own course of development, as they cared nothing for titles and orders, and whose invincible powers of resistance and endurance in the hours of extremest peril, will compensate for all the crimes and blunders of an imbecile government and an élite of flattering courtiers.

A nation that bows down to the official roll-call with idolatrous veneration gets nothing more than it deserves when the horse Incitatus is imposed upon it as its senator. It raises its own oppressors and emasculators. This is how it comes to pass that one falls asleep at Rossbach and awakes at Jena.



## NATIONALITY.

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If we did not know how completely the subjective rules our thought, how an erroneous conception evolved in our mind in regard to any phenomenon, renders our consciousness incapable of correctly apprehending that phenomenon and of perceiving the difference between it and the picture we have of it in our mind, if, in a word, we did not know how much more tenacious of life prejudice is, than judgment, and how much mightier fiction is than truth, we should be unable to understand how there could be any persons at the present time, who could consider the subject of nationality as one of the errors of the day and a matter of fashion, and designate it as a fraud in all earnestness—saying that it has captivated many minds, of course, but that, sooner or later, the whole subject will have sunk into oblivion. There is, in fact, a certain class of individuals, who have the assurance to call themselves statesmen, and take it upon themselves to direct the destinies of nations. They assert that this idea of nationality was simply invented by Napoleon III, in order to create internal dissensions in foreign states, and to raise up abroad promoters and supporters of his restless and adventurous policy. One single circumstance alone can prevent reasoning men from pronouncing the so-called statesmen, who talk in this way, incurable imbeciles, and that is the fact, that they all, without exception, belong to countries or races, in which the awakening of a national consciousness would be

fraught with peril, and hence, owing to their own desires and passions, their anxiety for the future, hatred of the aspiring peoples and fury at the threatened loss of usurped privileges, are biased in their observation and interpretation of facts. You find them in France, which laments the loss of its prestige as the leading nation in Europe by the unification of Germany and Italy; in Austro-Hungary, where the subjugated peoples are demanding their rights of humanity, and in Belgium, where the Flemings are contending with the Walloons for their emancipation. All those whose understanding has not been obscured by solicitude for their personal interests, appreciate the fact that the awakening of a national consciousness is a phenomenon that occurs necessarily and as a matter of course, when the development of the individual, as also of the race, has reached a certain point, and that it is as impossible to retard it or prevent it as to change the tides of the ocean or the heat of the sun in midsummer. Those persons who assure the people that they will soon cease to emphasize their nationality, stand on the same intellectual plane as the child that says to its mother, "Wait till you get to be a little child, and then I will carry you, too."

Upon what is this idea of nationality founded? What are its distinguishing characteristics? This point has been much disputed, and the question has been answered in many different ways. Some emphasize the anthropological element in it, that is, the result of common descent. This is so palpable an error, that it seems superfluous to refute it. As a matter of course I do not believe in the oneness of the human race. I believe that the different chief-races represent subdivisions of our species, and that their difference in anatomical structure and complexion are not merely the evidences of adaptation, and consequences of the transformation of a single original type, produced by

the influences of the environment, but that the explanation of them is to be found in a difference of origin. According to my opinion the degree of relationship that exists between a white man and a negro, between a Papuan and an Indian, is no more than that between an African and an Indian elephant, or between a domestic ox and a buffalo. But the differences between members of the same race and especially of the Caucasian race, are surely not so significant as to justify abrupt separations and clearly defined limitations of single national types. Every white nation contains tall and short individuals, light haired and dark, with eyes blue or black, and skulls long and short, some of a quiet and others of a lively temperament, and although one class may predominate in this nation and another class in that, yet all their physical and mental characteristics combined, are not of sufficient importance to determine unequivocally, that a certain individual should belong to a certain nation and not to any other, as, for instance, the negro is recognized as belonging to a certain race by his black skin, and hair and his peculiar physiognomy. The many attempts to find the average type of particular nationalities have no scientific value. The description may read agreeably, and one's self-love may be flattered by the picture, but it is all the mere invention of fiction. Where the features of such a type are not arbitrarily invented, they consist in superficialities, which are not innate but assumed; which can be laid aside even at an advanced age, and which, moreover, would never have been acquired if the individual had been brought up from childhood in a foreign surrounding, exposed to the influences of an alien nationality. Chamisso, who was already a half-grown lad before he knew a word of German, became as much of a German man and poet as any of those in whose veins the blood of the old Teutonic guests of Tacitus is

claimed to flow. Michelet, not the French enthusiast, but the German philosopher, reveals the intellectual characteristics, the profoundness, the moral earnestness, yea, even the obscurity, which is considered so specifically German. That agreeable thinker, Julius Duboc, is characterized by a genuine German idealism, and Du Bois-Reymond is the model of a thorough German scholar; Fontane, in his views of nature and his analysis of the human soul, is not only German but specifically north-German. We find similar instances in all other European peoples. Who would insist that Ulbach and Mueller, (the author of the story of village life, "*La Mionette*,") were not typical Frenchmen? Do we not find in Hartzenbusch and Becker every single feature characteristic of the Spanish poets? And what is there un-English in Dante Gabriel Rossetti, leaving his name out of question? It is not necessary to have a single drop of blood in common with a people whose general characteristics, with all its excellencies and all its faults we assume, if we are only living and brought up in its midst. If certain isolated authors and artists are seemingly a contradiction of this statement, we had better first proceed to investigate whether they and we, ourselves, are not liable to be influenced by two sources of error, which it is almost impossible to avoid. For it is a familiar fact that we yield with facility to the inclination to seek for those traits which we have arbitrarily ascribed to a nation—to the French, for instance, in the case of Chamisso—and hence discover them, as we know how quickly we transform any phenomenon to conform to the meaning ascribed to it by our preconceived opinions. While, on the other hand, it is extremely probable that a poet or an artist of foreign extraction, residing in England, for example, has the idea of the land of his forefathers continually in his mind, and imagines that he must have

certain peculiarities which remind others of that land. Influenced by the suggestion exerted upon him by these ideas he will unconsciously change his nature and assume all sorts of artificial mannerisms, in his endeavors to become like the picture which he has conceived in his mind of the inhabitant of his native land. The comical part of the whole is, however, that he does not exhibit the qualities that actually belong to the people in question, but, instead, those which are habitually and erroneously ascribed to them by English prejudice.

It is not common descent, therefore, which decides a man's nationality. The descendants of those Huguenots who emigrated to Brandenburg, have become most excellent Germans, and the Dutch settlers of New Amsterdam, irreproachable North Americans. Wars, emigration in masses, and intercourse with other nations, have blended together beyond possibility of recognition those national elements, which were probably distinct enough at first; and the laws of all civilized states show how little value they place upon common descent in reality, by the fact that they make it possible for foreigners to become "naturalized," that is, to become full citizens of a state originally alien to them, with the same rights and duties as all the other individuals of the nation.

Since the anthropological foundation of this idea of nationality can not be defended, some have sought to prove that it has a legal and historical foundation. They say that what fuses men into one nation, is a common history, a common destiny; it is the living together under the same government and laws, the remembrance of like sufferings and like joys. This theme admits of fine oratorical treatment, but it is, notwithstanding, purely sophistical, and is contemptuously thrust aside by all facts. Ask a Ruthenian of Galicia if he considers himself a Pole, despite the

fact that the Ruthenians have shared the fate, the laws, and the political institutions of the Poles for more than a thousand years, even as far back as our gaze can penetrate into history. Or inquire of a Finn—or a Suomi, as he would call himself—whether he believed that he belonged to the same nationality as the Finnish Swedes, with whom he, likewise, has formed a single political people, for more than a thousand years. It is true that the common possession of laws and institutions, and especially of habits of life, of customs and usages, leads to a mutual intercourse which may awaken a certain sentiment of fraternity, while, on the other hand, it is impossible to doubt that the Jews, for example, are looked upon as foreigners by the peoples among whom they live, chiefly owing to the fact that they cling, with incomprehensible blindness and obstinacy to certain external customs, such as the measurement of time, the observance of days of rest and feast-days, food regulations, the choice of first names and other matters which differ in every respect from the customs of their Christian fellow-citizens, and which must continually keep alive the feeling of isolation and antagonism in the minds of the latter. But it is not true that this community of interests is sufficient to form a nation out of separate nationalities, nor that it can impart a sentiment of common nationality to the citizens of a state.

No. These are all cunning subtleties which are shattered like soap-bubbles by the breath of truth. The individual human being bears the indications of his descent upon his brow but rarely; as a general thing it is impossible to recognize or distinguish them. He is not spontaneously conscious of them himself in an elementary way; and all this rigmarole about "the voice of the blood" is nothing but the creation of the imagination of the authors of second-rate suburban melodramas. Neither is his nation-

ality determined by the laws and institutions of his environment, although their influence upon the formation of his character is not to be denied. The language is what determines the nationality, solely and exclusively. This alone is what decides a man's relationship to a people; this alone is what gives him his nationality. Reflect for a moment on the importance of language to the individual, the share it has in the formation of his nature, his habits of thought, his sentiments, his whole identity as a human being! It is through his language that the individual assumes the ideas of the people which originated and developed this language, to which it has confided the most secret emotions of its mind and soul and on which it has stamped all the finest characteristics of the play of its imagination. It is through his language that the individual becomes the adopted child and heir of all the thinkers and poets, the teachers and leaders of the people; it is language that brings him beneath the spell of that universal suggestion which is exerted upon all the individuals who compose a people by its literature and history, and is the cause of their similarity in sentiment and action. His language is really the man himself. It is the means by which the most important and the most numerous features of all phenomena attain to his consciousness, and it is the chief instrument with which he reacts upon the external world. There may possibly be one man in several millions, who thinks independently and evolves original ideas out of the impressions upon his senses; while the millions think the thoughts already thought out for them beforehand, and which are accessible to them by language alone. There may possibly be one man in millions who acts out his ideas and renders them apparent to the senses of others by his power to compel men and nature to work his will; while the millions make use of language and make the processes

occurring within them apparent to others by speech alone. Language is, therefore, by far the strongest tie by which human beings can be connected. Brothers and sisters not speaking the same language would find themselves far more strangers than two entire strangers meeting for the first time and exchanging a greeting in the same mother-tongue. We have all seen instances of this, and they are continually occurring before our eyes, viz., that the English and the North Americans have waged wars with each other, and their interests have frequently clashed, but, as opposed to the non-Englishman, they consider themselves one, they consider themselves sons of Great Britain; the Flemings and the Dutch fought with fury in 1831, and yet they are now in the act of concluding a new fraternal alliance; when the Boers fought against the English, the heart of the Netherlander beat in anxious suspense, despite the fact that all political connection between Holland and the Cape had ceased to exist almost a century ago; the vast difference in laws, customs, political allegiances and historical recollections between France, Switzerland and Belgium, did not prevent the French-speaking Swiss and Belgians from sympathizing in word and deed with the French in 1870, with passionate but unjust ardor; and although the people in Norway had hated their thralldom to Denmark for centuries and had finally freed themselves from it, and to this day have no especially exalted opinion of the Danes, yet at the time of the Schleswig Holstein war, many enthusiastic Norwegians hastened to offer their assistance to the Danish people with whom they had nothing in common except their language. This nothing is, in reality, everything.

At a stage—long since past—in the development of peoples, the language may have been of less importance to the individual, as well as to the state, than it is at present.

This was at a time when the mass of the nation was deprived of its rights and enslaved, and all power was in the hands of a very small minority. Those of low birth had no need of language, so to speak. To what purpose would it have served them? At the utmost, to groan or to curse in their cabins, or to bandy coarse jokes at the drinking-places. They never encountered any human beings except those of their own village, who, without exception, all spoke the same language; to emigrate to a foreign country or to see foreigners at home, was something very unusual. All governing was done with the whip, whose laconic speech was understood without grammar and dictionary; schools there were none; the common man, seeking his little rights at the hands of justice, was never allowed to pour out his heart before the judge in living speech, but was obliged to make an advocate the interpreter of his complaint; the government would never condescend to any interchange of inquiry and answer with its subjects; even in the church itself, no man ever dared to say his soul was his own, as Catholicism represented its God as a distinguished foreign potentate with whom no one could communicate except in the strange Latin tongue, through the mediation of priests versed in that language. There was no necessity nor even any possibility for the private individual to emerge from the narrow limits of inherited surroundings, and, assisted by speech, find his way into broader paths. But when, as in municipal communities, the people were governed by their own laws and the citizens had opportunities to discuss and decide their own affairs, the question of language became, at once, of the utmost importance, and the citizens, if they were of different philological descent, divided themselves according to their vernaculars into nationalities which then contended with extreme bitterness for the supremacy. The

language was of slight importance to those of noble birth, but owing to a different cause. Their share of power was assured them by their birth, and they were the lords and rulers without having to open their mouths or make a stroke with their pen. (For it is possible at the present day in England, where all the institutions are so permeated with mediæval survivals, that a citizen of Holland, the descendant of some Scotchman who had emigrated to Holland several generations ago, might suddenly become an English peer and member of the House of Lords, by the extinction of the male line of the family which had remained in England. That is, a portion of the lawgiving power of the British realm, would fall into his hands without his being obliged to be a citizen of England, or even to know a single word of the English language!) And in the few cases in which proclamations were required, the aristocrat made use of the Latin tongue, with which he was either acquainted himself, or with which at least the priest, his private secretary, was familiar.

Under such circumstances, it is easy to understand that the nationality was something subordinate, because the language, its chief distinguishing feature, was likewise of little importance. But at the present day mankind has advanced far beyond this stage of development all over the world, even in Russia and Turkey. The individual has attained his legal majority; he has the right to fight his way out of and beyond the rank in which the accident of birth has placed him, even when he belongs to the lower classes. Legal procedures are now oral, the government has become approachable to the citizens and is responsible to them; in the school, in the army, every single individual composing the nation is spoken to, and every one must answer; Protestantism has taught the people to speak to their God in their own language, and to demand instruc-



tion and admonition from the pulpit in the vernacular. In every profession a control of language has become a necessity; even those supreme in rank, the monarch himself, can not dispense with a certain fluency of language on important occasions, and all the municipal and political institutions require the constant exercise of free speech. Hence, language has become of vast importance to the individual, and every restriction of his right to make use of his own language, and every force compelling him to express himself in a strange tongue, seem to him the most insufferable outrage and tyranny. A man who lives tranquilly surrounded by persons of his own race, a citizen of a community and state united as a nation, and thus so circumstanced that he would never have occasion to feel ashamed of or deny his mother-tongue,—such a man has in fact no idea of the real significance of the question of nationality. It is as impossible to describe and explain the rage and shame a man experiences in such a situation as it is to form a correct conception of a physical pain one has never experienced. No one has a right to join in the discussion of this subject except those who were born in a land where their nationality was suppressed and in the minority, where their language was not the official language, and where they were compelled to learn a foreign tongue—which they never can use except as foreigners—unless they were willing to renounce forever all hope of a higher destiny for their personality, of an improved career, and of exercising any rights as citizens in the community and in the state, as utterly and completely as a slave in the Middle Ages or a convicted criminal at the present day. A man must have experienced it himself to know the sensations it arouses to be robbed in his own country of all his natural rights as a human being, and compelled to grovel in the dust before a strange nationality. What is the denial of

civil rights compared with the renunciation of one's mother-tongue? What are fetters upon the hands and feet compared with fetters upon the tongue! A man wishes to emerge from himself, and he is thrust back and locked up within himself. He feels that he could be eloquent and he is obliged to stammer pitifully in a foreign tongue. He sees himself deprived of his most powerful means of influencing others, and he feels paralyzed and crippled. A man, worthy of the name will never adapt himself voluntarily to such conditions. Who would renounce, without resistance, his own identity? Who would voluntarily enter upon a life deprived of the grandest attribute of life: the possibility of describing and carrying into effect one's inward vital processes—sentiments and ideas. I can comprehend the devout native of India, who throws himself beneath the car of Juggernaut, and allows his body to be crushed; he does not believe that he is sacrificing his individuality in so doing; on the contrary, he is endeavoring to gain a richer development for it in a future life. I can comprehend also the Fakir, who voluntarily relinquishes the use of a limb, and passes his life in the twilight of a semi-existence for years and years, as a sort of half man, or human vegetable; he finds inspiration and reward in the ideas he evolves in his mind of the consequences of his pious sacrifice for the welfare of his soul. But I can not comprehend those apostates who renounce their nationality, who stoop to assume a foreign language, and torture it all their lives long, a laughing-stock to others, and to themselves a perpetual disgrace. Those who make such a sacrifice from cowardice, weakness, or stupidity, are at best, objects of pity. But how unspeakably odious are those who throw away their own language, which means their own self, the manifestation of their thinking Ego, and crawl into a strange skin, to gain some personal

advantage! They are even more degraded than the horrible Skoptzi, the Russian self-mutilators; for the latter emasculate themselves for the sake of a religious conviction, while those renegades allow themselves to be mutilated into mental eunuchs for money and the equivalents of money. It is impossible to express in words the unfathomable depravity of such sentiments.

To the honor of humanity be it said: these disgraceful apostates are in the minority everywhere. The majority cling to their language and defend their nationality as their life. The governing race may issue laws, to make their tongue the official language, and degrade that of the subjugated nationality to the common dialect of teamsters and menials, excluded from the school and the church, from the courts of law and the council halls; but if, in spite of this degradation, this language is a well-formed and developed one, or if it is the prevailing tongue in some other land, with a literature of its own, and serves anywhere in the world for the highest manifestations of human kind in statecraft and science, it never succumbs to its degradation. In such a case the oppressed nationality becomes the mortal enemy of its persecutor; it bites with fury the hand that seeks to gag it; it utters piercing cries for help, because it is not allowed to speak, and endeavors with the energy of despair, to bring down in ruins the governmental structure which is not a place of refuge for it but an inhuman prison.

No man of sound mind can be persuaded to allow himself to be guillotined; the French humorist has already established this fact; and it is impossible, by laws alone, to prevail upon a nationality, that has developed so far as to have a consciousness of itself, to renounce its language and special characteristics. A state, therefore, which includes several nationalities is necessarily doomed to piti-

less internal dissensions, and they can never be terminated except by some radical solution of the problem.

One radical solution—which has been proposed by several politicians—is the most extensive decentralization. As far as we can see now, such a solution is imaginable in theory only, it could not be carried into execution in fact. Reflect for a moment, how far such a decentralization would have to extend in order to satisfy all the nationalities of a state not constructed upon the foundation of a unity as a people. It assumes that every single citizen, to whatever race he may belong, shall be allowed to manifest his powers in all directions and in all spheres of labor, and to exercise all his rights as a human being and a citizen without being compelled to use any other than his mother-tongue. In this case not only all the business of the government—from the village post-office up to the Cabinet—and of the administration of law—from the justice of the peace to the highest court of the realm—would have to be carried on in all the languages of the land, but the representative assemblies of the community, the province and the country at large, would have to be conducted in all of these languages; primary, intermediate and high schools would have to be organized for each separate nationality; literary culture in each language would have to lead to all the governmental and academical honors and advantages, which usually form the reward of literary efforts; in short, there should not be the slightest obligation for any citizen to learn a foreign language to enable him to acquire anything within the reach of any of his fellow-countrymen without any such obligation. These are demands which cannot be realized in practice. It would mean the dissolution of the state into atoms, which would no longer cohere in any perceptible way. Such an extensive equalization of different peoples within

the same state is perhaps possible where only two nationalities of about equal number live together, as, for instance, in Belgium, but not in a state with ten or twelve nationalities, as in Austro-Hungary, where the tribes are unlike in numbers and degree of cultivation, and not settled down in masses, but scattered among each other in strange confusion, where often one village contains three or four nationalities and languages, and a district even more than this. Such a state must have an official or state language. Consequently the nationality whose tongue is the official and more prominent language becomes the ruling people, the equality of rights is at an end, all the other nationalities are wronged and degraded to a subordinate existence; there are full citizens and half citizens, there are certain inhabitants of the land who are allowed by law to speak, and others whom the same law condemns to dumbness; the fairy tale of the seven ravens, which tells how a maiden was not allowed to speak a word for seven years, becomes a governmental institution, and those inhabitants who are deprived of their simplest, and at the same time their highest rights as human beings, find themselves in the unendurable conditions described above.

There are certain enthusiastic statesmen who seriously believe that civilized humanity will some day arrive at a condition in which large political organizations will no longer be necessary. When this state of affairs comes to pass there will be no more wars and no foreign affairs; mankind will resolve itself into large groups, like vast families or moderate sized communities, in which the individual will enjoy all possible freedom of development, whose members will lend each other all that intellectual and physical assistance which man can not dispense with in his existence. Each group will be independent of the rest, and only when enterprises are under consideration, which are necessary

and useful to several at once, and which one alone would be unable to carry out, then all who have an interest in the affair in question will enter into a temporary agreement, having reference only to a determined object. It is true that in such a constitution of the human race, there would no longer be any question of nationality, as the independent groups could be so small that they would consist only of those who spoke one single idiom; but rather than believe in the future realization of this vision, I would prefer to accept the supposition that in the course of the organic evolution of human beings, they will arrive at a point some day where they will no longer need any language, or any symbolical action at all to make the states of their consciousness apparent to others, but that the molecular motion of one brain will be imparted directly to other brains by a kind of radiation or continuous transmission. I ascribe about the same degree of probability to this imaginary onward evolution, as to the visionary backward evolution from the national state into the independent community. Not to wound any one's feelings, I will call this degree of probability a very high one, but I expect, in return, the reasonable concession, that it will be a long while before it is possible to attain to either of these two ideals; in any event, much longer than the oppressed nationalities of the present day are able or willing to wait. Nor will it be an easy matter to induce them to accept a universal language. It may be possible that at some distant future, the most cultivated individuals of the human race as a whole, will make use of a common language, in order to have intellectual intercourse with each other. But it is difficult to believe, that sufficiently extensive circles of people will ever become well enough acquainted with this classical language of the higher culture, to be governed by and have justice administered in it. The leading

men of a nation would never be willing to clothe their thoughts in a foreign language in their most important abstract affairs—when they wish to initiate the young into the mysteries of science, or to persuade their fellow-citizens to momentous decisions, or when they wish to proclaim the judgments passed by their consciences in regard to what is right or wrong. To employ a foreign tongue would necessarily hamper their individuality and limit their freedom of action.

Laying aside all other radical solutions, there remains but one more, the most radical of all—force. Nothing will ever be accomplished by idle mediation and lame attempts at compromise. Where it is a question of such an original possession as language, of such an essential element of the personality itself, no allowances can be made; every demand for renunciation must be met by the gruff reply, "all or nothing." The struggle for language is another form of the struggle for existence, and must be fought as that is: one kills the enemy or is killed by him, or else seeks safety in flight. The struggle between nationalities is the finishing up of a process which began centuries ago, in part, thousands of years ago, and all this time has been, as it were, frozen up, but is now at last thawing out and hastening to its conclusion. How did it happen that different nationalities found their way into others? One people invaded and conquered the country of another people, which they only partially dislodged. Islands of the conquered nation remained in the midst of the conquerors, or else the victors were not very numerous and spread themselves over the conquered people only as a thin surface layer. In this case the struggle must be renewed now, at the point where it ceased at the time of the conquest. The victorious people must make a final exertion and displace the invaded people once for all, or

kill it mentally by depriving it of its language by sheer force, or else it must allow the invaded people to gather itself together and defend itself against the invaders and expel them from the country or else force them to renounce their nationality. The circumstances are different in other cases. A part of a people which did not find sufficient sustenance and prosperity in their own land, forsook its native soil and settled in another country. If this country was unoccupied at the time, but is now inhabited by tribes of later immigration, those who first took possession now necessarily consider the struggle for their language as merely one episode in the war against the natural obstacles with which the overflow of a people has always to contend when it sallies forth to found colonies in new regions of the earth. The colonists are obliged to protect themselves against their human foes as against swamps and streams, glaciers and chasms, fever and ravenous beasts, famine and cold, and they should consider the prosperity which they did not find in their native land, and sought in distant climes, as merely the prize of the conflict in which their very lives were at stake, and the victory won over all these animate and inanimate opponents. If, on the other hand, the land in which the emigrants made their home, was inhabited, they should remember upon what conditions they demanded and received hospitality. If the surrender of their nationality was one of these conditions, and they were satisfied with this, their weakness and cowardice deserve no sympathy, and their hosts are right to claim in return for the offered support, the renunciation of their language and individuality. If they were strong enough, however, to acquire for themselves a portion of the foreign country, without making any concessions of a dishonorable nature, they should now have also the strength and the will to do what they ought to have done then, once for all, if they

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had encountered resistance in this foreign land; either to retire from it entirely, or with the sword to wrest for themselves a free portion of the country, or to perish in an enterprise beyond their powers.

This is the way the question of nationality appears to me. It is the fifth act of the great historical tragedies which began to play at the time of the great migration of nations, and in part very much later. The intermissions have lasted a long while, but they could not continue forever. The curtain has risen and the catastrophe is approaching. It will be cruel and hard, but hard and cruel is the fate of all that lives, and existence is a conflict where no mercy is shown. The question here is not one of right, but in its highest and most human sense, a question of might. There is no law which can compel a living being to relinquish the necessary conditions of existence. That is only to be accomplished by force, and force invites resistance. No legal fanatic has ever yet demanded of the lion that he first enter suit for possession when he wants to eat a sheep. The lion takes the sheep because he is obliged to; it is his right to eat it. It would certainly also be the right of the sheep to kill the lion, if it could. In a matter of life or equality, all ideas as to right and might coincide. This is so evident, that even the written law of all countries reserves self-defense to the individual as his right, and thus acknowledges that there are certain situations in which a man must seek his rights in his strength. And what is war, but a similar case of self-defense, not by an individual, but by a people. A people recognizes, or thinks it recognizes, that something is necessary to its life, or to the conveniences of its life, and it reaches for it. It has a right to it, the same right that the lion has to the sheep. Should another people attempt to prevent it from obtaining this necessity, it must defend

its rights with all its might. The conquered ought not to complain; they can, at most, only seek to renew the strife. If a people has been decisively beaten, and no prospect remains of its ever becoming the stronger, then it must accept its fate as the final sentence of Nature and say to itself: "I was born a sheep, and must accommodate myself to a sheep's conditions of existence; it would certainly be better if I were a lion, but I am not a lion, and it is absurdly futile to quarrel with Nature over the fact that she did not cause me to be born a lion."

A nationality which is being deprived of its language, is in a position of self-defense. It has the right to fight for its most precious possession. But when it is not strong enough to defend it, it ought not to complain. In the same way, a ruling people has the right to prevent the freedom of its speech from being diminished by the presence of another nationality, and to make no concessions to the latter which would interfere with its comfort and convenience in any way. But when it is unable to establish its right by force, it must resign itself to recognize the other nationality as its equal; it must humbly descend from its higher standpoint as the ruling people, it must even perish, if the power to rule was the condition of its existence. I apply this doctrine, without the least partisan feeling, to all struggling nationalities alike, to the Germans in Hungary and Bohemia, as well as to the Danes in North Schleswig and the Poles in Posen, to the Rumanians in Siebenbuergen, as well as to the Italians in the Tyrol. The five million Magyars are right, when they seek to change the eleven million non-Magyars of Hungary into Magyars; they are only continuing the process of conquest, which they began under Arpad in 884; but the Germans, Slavs and Rumanians of Hungary are equally right, when they defend themselves, and should they prove to be the

stronger, should they conquer the scattered Magyars of Europe, and annihilate their tottering nationality, the Magyars ought not to complain, but accept the fate to which they knowingly exposed themselves, a thousand years ago, when they invaded a strange land, and risked their lives to win luxurious homes. The Czechs are right in their wish to form an independent state and to tolerate in it no German nationality; it is only resuming the battle on the "Marchfeld" and at the White Mountains; but the Germans are also right in opposing greater force to force; and after the two decisive battles of history, to fight a third, and let the Czechs know, once for all, that they are not powerful enough to pose as conquerors in a land into which they were able to steal twelve centuries ago, because no one happened to oppose them. It is impossible for Europe to escape much longer a mighty and violent rending asunder of the different nationalities. The scattered fragments of peoples will either join with the main body of their kind, or else summon the latter to their assistance and with its aid subdue the lesser nationalities, in the midst of which they are now living and whose oppression they are now enduring. The small nationalities who share the same country with others, and have no powerful relatives upon whom they can rely, are destined to destruction. They are not able to hold their own in the struggle for existence waged with their stronger fellow-countrymen. As nationalities, they must perish. The great nations alone will continue to exist, and among the smaller, only those who are so circumstanced as to be able to found an independent, national political organization, expelling or reducing to a subordinate position, if necessary, all the elements of alien nationalities which may have settled among them. It is not probable that the Twentieth Century will pass away without having witnessed the conclusion of this grand

historical drama. Until then a large part of Europe will see much distress and blood-shed, many crimes and deeds of violence; peoples will rage against each other, and whole races will be pitilessly crushed out of existence, tragedies of exalted heroism will be played along with the tragedies of human baseness, cowardly multitudes will allow themselves to be emasculated without resistance, armies of brave men will fall with glory in the combat. The survivors, however, will at last enjoy the full possession of their rights as nations, and be themselves in word and deed, always and everywhere.

These are gloomy prospects that are opening before us, but they have no terrors for those who have become reconciled to the universal law of life. Life is a struggle, and the strength to live is what constitutes the right to live. This law governs the suns in space as well as the infusoria in stagnant water. It governs nations as well and gives the direction to their fate from which no hypocritical legislation nor wily policy, nor the interests of any dynasty, nor the craftiness of any base renegades can divert it. Sentimentalism may wipe its eyes at the spectacle of the destruction of a people. Rational minds comprehend that it perished because it did not have the strength to survive, and class it with all the other extinct forms of existence which the world has left behind it in the course of its onward career.

## A GLANCE INTO THE FUTURE.

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I have ventured to draw upon the great, dark tablet of the future a picture,—the picture of events which I believe will come to pass. There is a vast empty space on this tablet, and I can not resist the temptation to cover one small corner with a few sketches drawn by my imagination.

The next generations will witness the violent solution of the question of nationality as I have endeavored to show in the preceding chapter. The small and feeble peoples will disappear, that is, lose their language and individuality, like the Vends in Lusatia and Mecklenburg, and the Celts in Brittany, Wales and Scotland. Kindred races will unite and endeavor to form a single great nation, as has already been done by the lower and upper Germans, the Provençals and the northern French, and as the Slavs instigated by the Russians, and the Scandinavians have begun to do. The fragments of powerful nations that have emigrated will either perish or else, supported by the main strength of the parent nation, fight their way to the supreme control of the country in which they have settled, and make it a component part of their own nation and state. The universal commotion, the striving and hurrying, the pushing and thrusting aside, will for a time produce a chaotic confusion among the different nations, which will finally crystallize into a few powerful formations. There will be then only four or five great nations in all Europe; each of which will be complete mistress in its own domain, having ex-

pelled or absorbed all foreign and disturbing elements, and have no inducements to cast any glances beyond its own boundaries for any but a friendly purpose, and for neighborly intercourse. Which nations will survive the great struggle is a matter not to be decided by the policy of cabinets, nor by the genius of individual statesmen, and least of all, by any mistake or achievement, weakness or strength of mind on the part of the leaders. It will be decided by the innate, natural vital force of the nations themselves, as it may be manifested in all possible ways: in physical strength as well as in fertility, in superiority on the battlefield as well as in progress in civilization, art and science, in an unconquerable passion for unity as well as in tenacious adherence to nationality. It is not an accidental circumstance, according to my opinion, whether a people is numerous or the reverse. The number of the individuals of a species in the animal kingdom also seems to me one of its most essential characteristics, one of its most distinctive features. If the Celts have almost vanished off the face of the earth, if the Greeks have never been able to increase their number beyond a few millions, if the Magyars, Albanians, Basques, and the Grisons of eastern Switzerland have remained very small peoples, it is because it was not organically inherent in them to become great. At the time of Alfred the Great, the population of England was about two millions, and probably, (there are no historical data on the subject), that of Scandinavia was about the same. At the present day England has 34 millions of inhabitants, while the population of all the Scandinavian countries combined is merely eight millions. Such different results in the increase surely can not be due to different conditions of climate and soil alone; for Denmark and the southern part of Sweden and Norway are not essentially different from the greater part of Eng-

land; and besides the English have not confined themselves to their island, but have peopled the greater part of the earth with their surplus vitality as a people. The fact that France at the beginning of this century had 22 million inhabitants and today numbers 37 millions, while the population of Germany has increased during the same period from 16 millions to 45 millions, can not be explained either by the difference in the conditions of soil and climate. The French have had the more favorable climate, the larger territory and the more fertile soil, and yet how materially they have fallen behind the Germans! It is, therefore, obviously a question of an organic phenomenon, a physical characteristic inherent in a people from its very beginnings. It may, indeed, be changed and deteriorated by intermixture with other blood and by unfavorable conditions of existence; but under ordinarily favorable circumstances it always asserts itself again, and leads finally to the inevitable historical result which no human power is able to prevent: viz., that one people spreads over broad territories, becomes more numerous and powerful with each succeeding century, and finally has entire sway over whole continents; while another people, not inferior to the former originally, gradually ceases to keep pace with it, shrinks more and more with each century that passes, diminishes more and more in extent and importance, and finally comes to lead only a shadowy existence or else vanishes altogether.

In this way we arrive at a Europe which has found its internal equilibrium, and in which the few surviving nations have attained to all that they could possibly attain by the utmost exertion of all their organic powers, in the way of territory, power and unification. One European nation will then respect the other and look upon it as one of the immutable phenomena of nature, which are accepted

as something firmly established for all time. The dividing lines between countries will be considered as unchangeable as those between the land and the ocean; and a Russian will feel as little inclination to invade German territory, or a German, Italian territory, as a bird to live under water, or a fish in the air. Each nation in its own domain will strive to improve its conditions of existence, and, gradually remove, one after the other, all the obstacles that prevent the free development of the individual in every direction, the most complete utilization of all his powers, and the most perfect well-being of the individual and of the community, of which it is possible to conceive; and will finally establish, either by a course of gradual development or by violent revolutions, those forms of government, society, industry and trade, which seem most suitable to it or to a large majority of its people. Aside from a tense intellectual life, the nations at that time will have but one universal occupation, that of gaining their daily bread from nature. The number of persons able to live by avocations whose purpose is other than the production of food materials, will constantly diminish. A more comprehensive utilization of natural forces and the invention of ingenious machines will make it possible to dispense with nine-tenths of the laborers now engaged in the industries. A society organized upon the principles of solidarity will transform entire communities into associations of consumption and obviate the necessity of small middlemen. All those who used to support themselves as shop-keepers and day-laborers will be compelled to return to the field and till the soil. Meanwhile the nation continues to increase, the people crowd closer together, the portion of land which can be allotted to each individual grows constantly smaller, and the struggle for existence constantly more difficult. The methods of agriculture and

cattle-raising will be more and more improved, deserts will be transformed into gardens, streams and lakes into fish-preserves; the soil will yield results never before conceived possible; but finally the hour will arrive, when in spite of all arts the soil can no longer be forced to increase its yield, and the question of food will rise like a spectre before the nation. Where can food be procured for the adults, whose lives have been lengthened by the more highly developed sanitary science? Where can it be found for the children, who are born annually by hundreds of thousands and who have all good appetites? It has ceased to be possible simply to cross the borders and peacefully overflow into the neighboring countries, as nearly identical conditions prevail throughout the whole of Europe, and the difficulties of one nation are the same as those of the rest. In the same way, a resort to force is out of the question. No campaigns are undertaken to annihilate another nation or expel it from its home, or unite it by force to the invading nation. Civilization has reached about the same point everywhere; customs and institutions have become alike; an animated intercourse, easy and cheap, has bound all the nations together by a thousand intimate ties; any attempt to seize foreign possessions would be considered a criminal offense, and it would not only be considered a crime, but an extremely dangerous and hence, foolish undertaking as well. For all the nations of Europe will have the same perfect and terrible weapons, the same military systems and training in the art of war; and if a sanguinary conflict were entered upon with some neighboring people to deprive it of land and home, the effect would be not to gain new abodes for the surplus population, for which the country had become too small, but, for want of room at home, to send it to certain death. Moreover, there would no longer be any jealousy between

the nations, since the struggles between them would lie in the past, and the right to existence of each great surviving nation be perfectly recognized by all the rest. The inhabitants of the entire continent, uniformly civilized and cultured, and uninterruptedly exchanging ideas, will gradually come to look upon all the nations of Europe as members of a single family; those of the same nation as brothers, and all other white men as cousins at least. In the same way, as the inhabitants of a state or province under a national government have no disposition now to invade a sister province, expel its inhabitants, and seize their land, so will also the idea of inflicting such an outrage on a neighboring European nation not occur to any nation there. What, then, is to be done to solve the food problem? The operation of one of the laws of nature will then begin to make itself felt. The excess of population in Europe will flow out of the continent in the direction in which it meets with least resistance. This least resistance is offered by the colored races, who are therefore destined to be first driven back by the sons of the white race, and finally exterminated. The sense of fellowship and common interests which will have gradually come to include all Europeans, will not extend to non-Europeans. The uniformity of civilization, an element of similarity between the nations of Europe, will not exist between the latter and the inhabitants of the other continents. The application of force, useless in Europe, promises easy results in other countries. The emigrating European will not leave the temperate zone, which is most beneficial and agreeable to him, more than is absolutely necessary. He will settle first the whole of North America and Australia, all Africa and South America south of the torrid zone. He will then take possession of the southern coasts of the Mediterranean and penetrate into the most hospitable portions of Asia.



The natives at first will attempt resistance, but will soon find their only safety in flight. They will give way before the Europeans and in their turn overwhelm the weaker races in their rear, whom they will treat as they themselves have been treated by the stronger whites. Each generation, however, will produce in Europe a new swarm of human beings, in excess of the capacity of the land to support them, who will be obliged to emigrate; the new stream will spread beyond the banks of the former torrent and the frontiers of European colonization move farther and farther into the interior of the foreign continents, constantly approaching nearer and nearer to the equator. The inferior races will soon become entirely extinct. I see no escape for them. Missionaries may supply them with any quantity of Bibles and external Christianity; theoretical philanthropists, who have never seen a negro or an Indian except in pictures or in Hagenbeck's caravans, may be sentimental on the subject of the child of the wilderness, and the romantic Maoris and Caribs—the Caucasian is better prepared for the struggle for existence than any other human race, and as fast as the white man requires the land of the savage to live upon, he will take it without hesitation. The individuals of the black, red or yellow races will then be his enemies, as it is to their interest to render his existence more difficult or impossible, and he will proceed to treat them as he has treated the animals, the enemies of his children, his flocks and his fields, as he has treated the great felines of Africa and India, the bears, wolves and buffaloes of the primeval European forests—he will exterminate them till not a vestige remains. The first stage of our journey into the future was the final establishment of the boundaries of the great nations that survived the struggle for language and individuality, which was followed by the universal intellectual development and

great increase of the different European nations. The second stage was the settlement of the whole earth by the sons of the white race, after Europe, first, and then the temperate zones of the other great continents had become too small for them, and the extermination of the lower and weaker races. Many hundreds and perhaps thousands of years will elapse before the white man will be driven by the pangs of hunger to the upper portion of the Congo, to the banks of the Ganges and the Amazon; before the last savage of the forests of Brazil, New Guinea, and Ceylon will have disappeared before him; but this will finally come to pass, and the whole earth will be subject to the plow and the locomotive of the sons of Europe.

Will a stationary period then ensue? Will the evolution, the progressive development of mankind then cease? No. The history of the world is the *perpetuum mobile*, and it runs on and on farther than we can follow it. The white or Caucasian race, which will be the only one surviving upon the earth, will continue to flourish vigorously in its old home on the continent of Europe and in the temperate zones of other lands. The nations will continue to increase, and a new generation will be continually growing up, demanding room on the earth and a place at the table; and after several ages it will again be necessary for the new generation to seek a home away from the old hive. But by that time there will no longer be any inferior races, which they can crowd out and exterminate easily and without the poignant consciousness of outraging a brother. Men will everywhere encounter their own type of physiognomy and figure, everywhere kindred European languages, views, manners and customs, everywhere the familiar forms of government and civilization, and everywhere some civilized white man will have written his right and title to the land in the sacred furrows of the plow.

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In which direction are the emigrants to turn? What is to be done with those born in such excess in the oldest civilized countries? A certain law will still be in operation, and again it will open a way out of the difficulty—the law of least resistance. There will no longer be any inferior races, but the descendants of the white emigrants who have settled nearest the equator will deteriorate organically in the tropical climate, and become a subordinate human species in the course of a few generations, so that they will compare with their cousins in more favorably situated countries, as the negro or redskin now compares with the white. The fact that this must be the case is established beyond a doubt. The most virile and warlike white peoples degenerate in hot regions in the course of a few generations, until they become so feeble and indolent, so stupid and cowardly, so incapable of any resistance to vices and ruinous habits, that they become in time scarcely more than the shadows of their fathers and ancestors, if they do not die out entirely from barrenness and disease. This was the fate of the noble Vandals, in less than a century; as Germanic giants they conquered Carthage, and a hundred years later, as whining weaklings, they were driven out by the wretched Byzantines. The same phenomenon is observed even at the present day, whenever a tropical country is subdued by a people of the Caucasian race. The English government makes every effort to increase the number of marriages between the English soldiers and white women in India, but all in vain. "We have never succeeded," as Mayor-General Bagnold expresses it, "in raising enough male children to keep the regiment supplied with drummers and pipers. In French Guiana, according to a fine report by Dr. J. Orgeas, 418 marriages were solemnized between Europeans from 1859 to 1882. Of these marriages, 215 have been childless, the

remaining 203 have produced offspring to the number of 403. Of these children, 24 were still-born; 238 died at different ages between April, 1861, and January, 1882. After 23 years, therefore, 141 children represented the entire posterity of 836 married Europeans. And the appearance of this new generation! They were almost uniformly creatures with small skulls, stunted in their growth, wrinkled, and afflicted with manifold deformities.

The settlers between the tropics, therefore, are doomed to deterioration; they not only fail to advance the civilization which they have brought with them, they even lose it entirely, and soon have nothing left of their birthright but a debased language and the self-conceit of the caste, none of whose distinctive features, physical or intellectual, have been retained. In presence of these degenerate starvelings the vigorous immigrants entertain no scruples, and the feeble resistance the former are able to oppose is not worthy of consideration. A new stratum of human beings, needing land and sustenance, therefore spreads out over these lands bathed in the sun's most fervid rays, burying beneath it the previous layer which has been dried up, and resuming the ineffectual battle with the climate. The equatorial regions will therefore perform the same function in the future history of man as in meteorology. In the same way as the cold waters of the poles flow toward the equator, evaporate there, and are sent back in the form of vapors and clouds; in the same way as the ocean's surface is lowered by this evaporation, which lowering must be counteracted by the arrival of new waters from the cold regions; in the same way, finally, as the waters of all the oceans are thus kept in constant motion, the respective rain-fall upon the whole earth regulated and the remotest lands made fertile, so the surplus will then flow from the older civilized countries to the tropics, perish there, evap-

orate, as it were, and be replaced by a constant, flowing stream. The equator will become a fearful caldron in which human flesh will melt and evaporate. It will be a revival of the ancient worship of Moloch. The peoples of the temperate zones will cast a portion of their children into the jaws of the fiery furnace and thus manage to retain room in which to prosper and develop, themselves. The picture is horrible; the reality, however, is not. For it is not a painful death to which the children of the nations are condemned. A life of luxurious ease smiles invitingly before them in the tropical climes; soft breezes and waves envelop them; field and forest offer them food in abundance, without compulsion; existence seems easier and more delightful to them than to their fathers and brothers on the refractory home soil; and with sweet, burning kisses, to which they yield themselves in a voluptuous ecstasy, the sun drains their life from every pore. It is a death which every effeminate nature will prefer to the rude struggle for existence; it is a gentle melting and dissolving away, which is as delightful as an opium dream, and which is more likely to arouse envy than pity.

However, the equator will not always answer the purpose of a caldron or evaporator for mankind; it will not always be the safety-valve, opening as often as the pressure becomes too great in the older civilized countries. A time will come when the circumstances will be entirely the reverse. The cooling of the earth is constantly going on, the belt of eternal ice at the poles spreading farther and farther downward, it will include one parallel of latitude after another, and constantly choke the life out of new regions. Human beings will emigrate towards the tropics more eagerly than ever, but the torrid zone will have ceased to be the insidious, caressing destroyer, and have become the nurse of mankind. She alone will still feed her children

abundant; she alone still allows them a chance for complete development and cheerful prosperity, and to be and remain wise and strong. All culture and all civilization will center near the equator. Palaces and academies, high-schools and museums, will arise there; there men will think, investigate, invent, create. There alone will men still be able to live out their lives to the full. So much the worse, therefore, for the indolent, the easy-going, or the timid, who have remained too long in the older countries. When at last, forced by the encroaching barriers of ice, they do take their staff in hand for the journey, they will find the more comfortable dwelling-places already pre-empted and well guarded by a valiant race, which has become more flourishing and powerful, while they have been growing weaker from cold and hunger. They may encamp around the borders of the magic circle like a flock of wolves, and gaze with ravenous glances over into the land of plenty; but whenever they venture to invade it and skirmish for booty, they will be driven back into their icy deserts by the strong and robust masters of the favored land. And after that? What will happen after that, I know not. Here the sombre future becomes darker and darker still. I can not distinguish anything further, and thus my story must end.

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